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The New Year Honours List

AS is customary, the recipients of honours in the New Year List include the names of a number of those associated with transport or closely-related industries. Outstanding in the present list from this point of view is the knighthood conferred on Mr. R. H. Wilson, the Comptroller of the British Transport Commission. Mr. Wilson is a relatively new entrant into the transport field, but already he has made his mark. It will be recalled that he was largely responsible for the presentation of the case of the British Transport Commission for higher railway charges in the recent hearing by the Charges Consultative Committee. Sir Alexander Maxwell, Chairman of the British Travel & Holidays Association, receives the K.C.M.G. and Mr. H. F. Downie, one of the Crown Agents for the Colonies, becomes a K.B.E. Among those who are to be invested with the C.B.E. is Mr. W. H. Salkield, General Manager of the Gold Coast Railway, who recently has been on leave in this country, and who has a very high reputation for his administration of his railway, one of the very few which operates on a profitable basis. Mr. William Wells, General Manager of the Antofagasta (Chili) & Bolivia Railway, receives the O.B.E. As will be seen from the list on another page, there is a number of names well-known among railwaymen among those receiving the M.B.E. They include Mr. J. W. Dunger, Assistant Commercial Superintendent, Passenger Train Services, Eastern Region; Mr. G. W. Ferguson, Staff Assistant to the C.R.O., North-Eastern Region and Mr. W. T. Geden, the Stationmaster at Paddington. Mr. G. A. V. Hayes, Senior Secretarial Assistant, British Transport Commission, and Mr. F. W. Knight and Mr. F. W. Moore, the former an Executive Officer and the latter an Inspecting Engineer of the Crown Agents for the Colonies, are also among the new M.B.Es.

Absenteeism on the Railways

THE absenteeism amongst railwaymen in this country during the Christmas holiday was as inopportune as it was inexcusable. One characteristic of British railways has been their reliability in operating advertised services at all times and in all weathers and circumstances, of which they proved themselves more than capable during the war. If, through absenteeism, services are delayed or interrupted, or, what is more, the public is given any sort of reason to fear this, the railways lose one of their best selling points in relation to other forms of transport; nor, in the case of passenger traffic, are Christmas holiday travellers the best of clients in whom to engender misgivings as to the reliability of the railways. Moreover, at a time when railwaymen, despite the financial position of the railways, are seeking higher wages, the selfishness or recklessness of even a small minority can do the greatest harm to a cause for which much public sympathy might otherwise exist.

Britain and the Argentine Railway Market

WE publish this week the first part of a comprehensive survey of the Argentine railways, in which special emphasis is laid on the effect of fuel supplies on traction policy. For nearly a century Britain developed and brought to a high state of efficiency a railway network totalling 26,710 miles. This great system is now nationally-owned, but another long-forged link between the two countries continues, represented by the supply of all types of railway materials of British manufacture, particularly locomotives. A mutual understanding, with Britain fully aware of the importance of the Argentine market, and Argentina recognising our especial ability to cater for her transport needs, seemed to suffer a setback last year, when, despite the signing of governmental decrees, there was a lag in payment for some £7,000,000 of equipment delivered and in course of delivery from British railway manufacturers. The unfavourable impression created was the greater in that Argentina had long had a high reputation for prompt payment. Happily, however, all outstanding debts for material so far delivered have now been paid, and relations between this country and Argentina enter on a new half-century with goodwill on both sides.

British Railways Rolling Stock Programme

DETAILS of the locomotive, carriage, and wagon building programme for 1951 announced by the Railway Executive are given elsewhere in this issue. It assumes, having been drawn up before the acuteness of the raw material shortage was made clear at the New Year, that this year will see an easement in this respect; as such, it may have to be modified. Meanwhile, as regards steam haulage, whilst perpetuating certain existing Regional types of locomotive, it launches out into construction of the new standardised types. The provision for 50-odd diesel-electric and diesel-mechanical shunting locomotives is by no means British Railways' last word on diesel or gas-turbine traction, as the accounts of the various experimental locomotives given in this journal show from time to time. Even so, as Mr. R. A. Riddles, Member of the Railway Executive, has said, steam must be the main form of propulsion in Britain for some years to come. An important feature of the wagon programme is the anticipation of increased steel output and availability, which accounts for the building of large numbers of special types for this traffic.

British Transport Commission Statistics

STAFF of all grades of British Railways at the end of the eleventh four-week period, to November 5, were some 3 per cent. less than one year, and 7 per cent. less than two years ago. For the same period, British Railways revenue-earning freight tonnage was nearly 2 per cent. more than one year, and 1 per cent. more than two years ago. Passenger-journeys in September, 1950, were 3 per cent. less than one year, and 3 per cent. less than two years ago. The total traffic receipts of British Railways (excluding cartage) for Period No. 11 were nearly 13 per cent. more than one, and 6 per cent. more than two years ago—mainly because of the freight rate increases last May. The efficiency figures in relation to operating show a fairly steady improvement over the past two years. There are, of course, no figures available of outgoings. Even so, the available statistics seem to show very roughly that the output of the staff (which is seriously depleted in certain grades) has been maintained. Also for Period No. 11, mineral receipts were up by 18, and coal by 25 per cent. over 1949, for reasons suggested in previous issues of this journal; and the takings of both the freight haulage and provincial road passenger undertakings of the Commission continued to rise.

Transport Co-ordination in East Anglia

THE decision of the British Transport Commission, in furtherance of the integration of transport, to set up a combined commercial freight transport organisation in Norfolk, Suffolk, and the greater part of Essex outside the London area, is mainly experimental. The area embraced corresponds roughly with existing Railway and Road Haulage Executive commercial territorial divisions. The first occupant of the new post of Area Freight Superintendent for the combined commercial services is to be Mr. G. G. Goodings, now District Commercial Superintendent, British Railways, Norwich. His headquarters will be at Norwich, with "connecting offices" at Ipswich and Colchester to provide contact with local trade and industry. He will have at his disposal both railway and road haulage commercial staffs; but rate quotations and arrangements for consignments are still to be made through local railway stations and British Road Services depots; nor, at least for the present, is it intended that the new provisional organisation should do more than co-ordinate the activities of the existing rail and road haulage commercial organisations. Consignors will retain the right to specify the means of transport they prefer, but commercial representatives will advise customers on the speediest and most efficient service—or, what is significant, combination of services.

Bogie Canteen Coaches for Nigeria

SIXTEEN canteen coaches being built for the Nigerian Railway, which are described and illustrated elsewhere in this issue, are nearly ready. These carriages, on completion by Cravens Railway Carriage & Wagon Co. Ltd., will be despatched fully erected, and will be attached to long-distance trains running on the Lagos - Kano and Port Harcourt - Kaduna sections, distances of 700 and 569 miles respectively. They will also be used on trains operating at distances of 150 miles or more, where it is considered that such an arrangement will be of benefit to second and third class passengers, who are dependent for food on local vendors at stopping stations—not always a satisfactory arrangement. Food will be collected from the counter served on papier-maché plates and containers. It is believed that the provision of canteen coaches is an innovation on any Colonial railway. The exterior of the coaches is generally similar to the Nigerian Railway third class stock which was described and illustrated in our issue of January 13, 1950.

French Marshalling Yard Practice

FOR some years before 1940 the various French railway managements had given much attention to the problem of mechanising their marshalling yards. The great destruction wrought in the course of the closing period of the war has necessitated practically total re-equipment in a number of cases. A good idea of what has been accomplished in this important field was given in a paper, read on October 25, 1950, before the British Section of the Société des Ingénieurs Civile de France by the Signal & Telecommunications Engineer of the S.N.C.F., Monsieur J. G. Walter, as well as by the well-produced film which he showed at the same time, depicting every phase of operation of a modern French yard. A report of the meeting is given elsewhere in this issue. Considerable interest was aroused by the "ball machine," invented by Monsieur Robert Lévi, serving to control the automatic operation of the points as vehicles descend from the hump and based on the idea of providing a mechanical and electrical equivalent of a pointsman running just ahead of each wagon, and reversing such points as need to be operated for it just before it comes to them. Some surprise was expressed that this ingenious contrivance had as yet been used only in France.

Travel Facilities for American Visitors

TOURISTS visiting Britain from North America have shown a progressive increase in recent years, but, as was pointed out by Lord Jowitt at the recent annual meeting of the British Travel & Holidays Association, only 50 per cent. of Americans travelling to Europe in 1949 came to this country. There is thus ample scope for attracting more dollar visitors. The production of a "Reference Guide to Tourist Facilities in Great Britain and Ireland," prepared by Mr. T. D. Slattery, General Traffic Manager, Associated British & Irish Railways Incorporated, New York, for the use of travel agents, is therefore timely. This guide, issued in loose-leaf form to allow of addition and revision, sets out the special facilities obtainable only in North America, to travellers from the U.S.A. and Canada on railways in this country. These facilities include the issue of mileage coupons affording a 25 per cent. reduction on ordinary fares, and London "go-as-you-please" tickets. Information is also given on hotels, meals on trains, Continental services, fares between important centres quoted in sterling and dollars, baggage arrangements, and other aspects of travel in the United Kingdom and Ireland.

New Toledo Union Terminal, U.S.A.

THE new Union Terminal at Toledo, Ohio, the inaugural celebrations of which were described in our December 15, 1950, issue, is, presumably, the latest example of station planning in America. Though constructed by the New York Central Railroad, it is also served by passenger trains of three other railways, the Baltimore & Ohio, Chesapeake & Ohio, and Wabash. The number of trains arriving and departing daily is 55, dealt with at five through island platforms, served by nine roads, and three bays. Departing passengers approach the new station by a new high-level plaza, and, alighting from their cars, enter the station building by a long and wide covered bridge spanning a street below. This gives access to the ticket lobby, waiting room, restaurant, baggage and parcel offices, all of which, with the approach bridge, are two storeys above platform level. An overbridge concourse 44 ft. wide and 195 ft. long spanning the platforms and tracks, leads off the ticket lobby; and from it each of the five main platforms is reached by two staircases and a 1 in 10 ramp. There is also one passenger and one combined passenger and baggage lift from the ticket lobby to platform level.

Protection Against Attack by Termites

SO many overseas railways suffer serious losses from the depredations of termites (white ants) that widespread interest among them is bound to centre in an announcement recently made by the United States Department of Agriculture. As a result of research, which has been carried out for the past five years, it is now stated that a single treatment of No. 2 fuel oil containing 5 per cent. of D.D.T. applied to soil surrounding any timber will

completely protect the timber from attack by termites for at least five years. The mixture must be applied at the rate of one quart per cu. ft. of the soil. Treated five years ago, the soil under test is still resistant, and seems likely to remain so for some time to come. The entomologists hope to establish whether D.D.T. is better for this purpose than sodium arsenite, which, though cheap, is poisonous. As well as sleepers, there are many forms of timber which railways would wish to protect, such as posts for structures, fencing, and telegraph lines.

German Signalling Developments Reviewed

AN article in *Signal und Draht* for October, 1950, by Herr Rudolf Kempf, reviews a particularly interesting period of signalling developments in Germany, namely, from 1925 to 1935, with reference to what was done in the Ruhr district in regard to mechanised marshalling yard apparatus and improved designs of power locking frames, in both of which great progress was made, as compared with previous German practice. In 1922 the then Signal Department of A.E.G. decided to endeavour to produce apparatus to accelerate marshalling yard operation and replace manpower by mechanical processes. The problem proved to be more difficult than was anticipated, and Herr Kempf deals with attempts to get automatic working of the points, to construct rapid acting point motors, route setting and storing mechanism, and above all, satisfactory methods of controlling the points as vehicles passed from the hump line. Several years were spent in fruitless experiments with all manner of axle-counters, treadles, and other devices, with nothing practical achieved, but eventually the problems were solved. The account given by Herr Kempf of power locking frame developments leading to the "multiple-row" pattern also makes interesting reading.

A Change at the Railway Executive

WHEN the Railway Executive was established in the summer of 1947 there was considerable speculation as to who would undertake the position of Chairman. It was recognised that the holder of this office would be faced not only with a wide range of problems directly concerned with the implementation of the provisions of the Transport Act, 1947, relating to the unification of British Railways, but that he would have to surmount many personal and psychological difficulties. In view of the need to avoid as far as possible any interruption in the day to day working of the railways while effecting the changes called for by the Act it was practically a foregone conclusion that the Chairman would be one of the General Managers of the nationalised main-line railway companies. In August, 1947, it was announced by the Minister of Transport that Sir Eustace Missenden, the youngest of the General Managers and executive head of the smallest of the main-line railways—the Southern—had accepted the appointment.

As was briefly announced in our last week's issue, Sir Eustace Missenden who, at the time of his appointment made it clear that he was not accepting office for any set term, has now asked to be released. The correspondence which has passed between him, Lord Hurcomb as Chairman of the British Transport Commission, and Mr. Alfred Barnes as Minister of Transport, is reproduced elsewhere in this issue. Incidentally, it may be noted with gratification by railwaymen that it is on a considerably higher plane than that which has characterised similar correspondence relating to the resignation of principal executives of some other nationalised industries. In it Sir Eustace Missenden pays generous tribute to the wholehearted, experienced and loyal assistance he has received from all members of the Executive and an exceptionally able staff, the valuable help of the Chief Regional Officers and all grades in the Regions. He even has a word of praise for the trade union officials, although in some respects at least their co-operation has not been as wholehearted as it might well have been. As a result he feels that the preliminary work of organising the railways on a national basis has been pretty well covered. A solid foundation has been laid on which those who come after can safely build, but he feels that this can best be carried out by a fresh mind.

It was made clear at the outset that the organisation which was established at the end of 1947 was not intended to stand for all time, but that it should be reviewed after about three years. Sir Eustace Missenden, in an article which he contributed to our April 21, 1950, issue, looked forward to the time when organisational changes, which he realised to be necessary, would become practicable. He said that there was reason to expect that, as unification was achieved, as the new standard practices and equipment were adopted, and as the undertaking got into its stride, a greater devolution of responsibility of the Railway Executive to the Regions would be possible. He, and also Lord Hurcomb, have frequently spoken of the need to avoid over-centralisation and to effect de-centralisation in the transport industry in this country.

It becomes clear, therefore, that Sir Eustace Missenden's departure from the Chairmanship of the Railway Executive may well mark the end of an epoch. To have reached a position in three years at which it is possible to feel confident that the time is ripe for a further development in the organisation of British Railways is no mean achievement. When the Transport Act was passed there were many who envisaged a five-year period as being required for the initial organisation to take shape. It is undoubtedly true that there is much still to be done and that the railways are still a long way from achieving the benefits of unification which were held out at the time of nationalisation. It is necessary only to recall the fact that the mergers of 1923 had not reached full fruition in some cases by the outbreak of war in 1939 to realise the immensity of the task facing the management of the State railway system.

On the other hand, it now appears that the central organisation established at the end of 1947 to lay down broad standards affecting such fundamentals as permanent way, signalling, safety devices, types of locomotives, carriages and wagons, operating and commercial activities and so forth, may be considered to have reached a point which satisfies those responsible for it as being firmly based. The next phase would seem to be the devolution of a greater measure of responsibility and control to the Chief Regional Officers and the other officers in the Regions. There can be little doubt that a case could be made on the grounds of flexibility, economy in time and manpower, and the day-to-day efficiency of services to the public. Obviously, much will depend on the personal characteristics of the new Chairman of the Railway Executive, and also on the views held by the functional Members, some at least of whom may not consider the time ripe for such a development.

Some appreciation of Sir Eustace Missenden's work is given in a succeeding article from the pen of a railway officer who has been in close touch with him since the formation of the Executive. From the gaps in the dates in the correspondence between Sir Eustace Missenden and Lord Hurcomb and the Minister of Transport it is reasonable to assume that an endeavour was made to induce him to continue in the Chairmanship for a further period. In his letter to Lord Hurcomb Sir Eustace Missenden adduced good reasons why he should not, including the undoubted very heavy strain of the past three years coming after eight years as General Manager of the Southern Railway, which covered the whole period of the war. One may be pardoned for wondering whether there were not other reasons which also had their influence at this particular time. It is quite clear that his decision has been a matter for keen regret on the part both of the Minister of Transport and of the Chairman of the British Transport Commission, and we are sure that it will be shared by very many others. Sir Eustace Missenden's railway career has been an outstanding example of achievement. From one of the most junior posts and without influence of any kind he raised himself to the highest executive position on the world's largest railway system. His has been an outstanding example of the opportunities which existed in an era which is now closed.

Sir Eustace Missenden

IN January, 1944, when the four main-line railways were 21 years old, I wrote a series of articles about them for the old *Financial News* and ventured to include some notes on the leading personalities. I then observed of Sir Eustace Missenden that he was

> "a comparative newcomer to the general managers' circle and somewhat of a 'dark horse.' He is quietly spoken, yet he carries a 'punch' on paper; and he is held in high esteem by his colleagues of the other railways besides his own."

After seeing him at close hand for three-and-a-half years, in all the ups and downs of a great business in process of reorganisation, it is still difficult to give a very clear appreciation of him. Why this should be so it is hard to say, but it is not unusual, although naturally the picture is not quite so elusive to sketch as it was. The railway industry has possessed some first-class leaders and administrators: men like Lord Stamp, Sir James Milne, Sir Ralph Wedgwood, Sir William Wood, Sir Herbert Walker, and Frank Pick. All these were in executive control of vast organisations and all (except Pick) presided at one time or another over the affairs of the combined systems. Yet it is probably true to say that none had to tackle a job with such responsibilities and of so tricky a nature, requiring great qualities of leadership, as did Sir Eustace Missenden when in 1947 he accepted the Chairmanship of the Railway Executive.

It was not only that the four groups had to be unified in the shortest possible period of time; that was a piece of work which those trained in top railway management in the years 1923 to 1939 well understood. But here was a great industry, employing over 600,000 people, which had been given the principles of a completely new type of organisation for immediate operation; when one first considered it from the old companies' headquarters, with their well-established methods of administration, it was difficult to see how it could succeed. Not only had Sir Eustace Missenden and the other Members to face this, but he had also personally to consider the new method of control at the top.

The newly-formed Executive consisted of nine Members, six of whom had onerous functional responsibilities, and each Member shared equally with his colleagues, including the Chairman, the collective responsibility for the whole administration. Nothing like this had been experienced in the railway industry before. It was separate management for particular functions and committee management for general direction. There was also the method to be used in organising the railways for working purposes, and this was left for the Executive to work out its own proposals.

The Members of the Railway Executive were formally appointed in November, 1947, but they had their first "shadow" R.E. meeting somewhat earlier—in September of that year. Much, of course, depended on the Chairman, and from the first Sir Eustace Missenden established for the Executive a style and method which was at once businesslike and distinctive. The records of the proceedings of the Executive since its inception are models of their kind, and they show the very wide range of the Executive's work. As one would expect, there often has had to be close discussion on many of the very difficult problems which have required solution, particularly in the initial stages, but the skill and wisdom of the Chairman's steering has always been apparent. Outstanding issues one calls to mind at random have been the functions of the Chief Regional Officers, the placing of motive power control in the organisation, the establishment of the Regions, "penetrating" lines, and so forth.

It would be untrue to say that there have never been different ideas about what should be done; had there not been it would have been a sign of weakness. But the Executive arrangements on the whole have worked well. This small group of men, headed by Sir Eustace Missenden, have not only laid the foundation of the new unified British Railways and devised the regional organisation, but have supervised the day-to-day services and facilities and directed rehabilitation work so far as the means available allowed. Theirs is the responsibility and to them must go the credit, though they have been loyally supported by a railway organisation second to none in business ability. Incidentally, there has never been a single occasion that one can recall when the Chairman and Members of the Executive have felt that they did not enjoy the loyalty and full co-operation of the Chief Regional Officers.

Sir Eustace Missenden is retiring from the railway service apparently as fresh as when he was in his prime. There are two main types of business leader; one is the creative type, like Sir William Wood, Sir James Milne and Frank Pick, who best generate their ideas by working closely on the detail of problems; the other type is more free of detail, economical of effort, and much more sparing of nervous energy. Sir Eustace Missenden inclines to the latter type, as anyone who has visited him could see. Large-scale business requires both types, and its successs very often depends on the careful distribution of these qualities in positions of influence. It was always interesting to observe the different characteristics of Sir Eustace Missenden and General (now Field Marshal) Sir William Slim, when the latter was a member of the Railway Executive.

Sir William Slim appeared to the professional railwayman as an engaging personality, and he was much respected and admired. He used humorously to say that he was naturally lazy, though his bright eye belied this and suggested the man of action; however that may be, one often found him in his room reclining in his easy chair, relaxed and reading his papers, which it seemed he could easily get out of order! Sir Eustace Missenden, on the other hand, invariably keeps to his desk when handling business, and practices strict regard for order and discipline in dealing with his office work. Probably the secret of his freshness now he is retiring is the method and evenness of his daily routine, however difficult the problem with which he has had to deal. One has rarely seen him ruffled; he obviously possesses considerable staying power.

Few have been the occasions when he has had to express himself really forcibly, and although he handles cases of discipline or slipshod work with telling effect (no one takes liberties with him and he has a gift for finding the weak spot), he is obviously very human and, like most people, finds "personality" issues distasteful. Incidentally, it is well known that the deep attachment which exists between Sir Eustace and Lady Missenden has had a considerable influence on him in his business life.

It appears to an onlooker that during the past three years Sir Eustace Missenden has developed a sense of publicity technique, which is a considerable attribute in large-scale business and which is not often acquired. At his press conferences his quiet, courteous manner has earned him the respect of journalists and writers who have come to hear him. There is an interesting contrast between him and "Bill" Allen to whom journalists have warmed by his obvious sincerity and his natural eloquence. They are two markedly different personalities, but both equally effective in this particular work.

Sir Eustace Missenden took very great pride in the opening of the new ocean terminal at Southampton last July. He conceived and carried out this project in a period of considerable difficulty, and in this structure Britain now possesses a really fine terminal for the care of ocean travellers. It will easily stand comparison with any other like building in the rest of the world.

In summing up Sir Eustace Missenden's work for British Railways, one may say that not only has he discharged his responsibilities to the full as Chairman of the Railway Executive, but also that the officers and staff, even mature and experienced ones, learned a great deal from him. It may be that this will prove to be his most enduring contribution. He rose in the railway service from the bottom to the top, and in doing so he practised, and demonstrated to those under him, the art of management, which is something one cannot learn from books but only by actual experience.

A. J. P.

The Need for More "Staggering"

THE work of local transport groups during the past ten years in making travelling conditions easier for Londoners was highly praised by Lord Latham, Chairman of London Transport Executive, at a reception given on December 14 to leaders of the 56 groups covering the industrial areas of London, and officers of the operating and commercial departments of London Transport and the four Regions of the Railway Executive.

The groups, formed during the war with the support of the London & South Eastern Regional Board for Industry, meet to discuss transport difficulties with London Transport and main line railways and plan the adjustment of factory hours. They are part of the framework of the London & South Eastern and the Eastern Regional Boards for Industry and represent some 1,200 industrial undertakings employing 500,000 workers.

The local transport groups, said Lord Latham, had brought them into close personal contact with industrial management and with the body of industrial workers. Through the groups they could seek in co-operation to work out solutions to transport problems as they arose. Those meetings, where intimate and detailed local knowledge was brought to bear, fostered appreciation of each other's problems.

In present circumstances, including full employment, the peak problem has become more acute. The numbers using London Transport services in the rush hours is greater than ever, and is concentrated into an even tighter period, particularly in the evening. Industrial and office workers tend now to finish work at the same time, presenting an almost insuperable task in the prevailing traffic conditions. Further staggering of hours is essential and can come only through the groups.

The London public will accept some inconvenience and discomfort if it feels that what can be done is an improvement. Many of the impediments are beyond the control of London Transport, such as the growing congestion of the streets. For these and other reasons, Lord Latham stated, he and his colleagues were convinced that the work of the local transport groups was as necessary as ever, and that they should sustain and maintain close and friendly co-operation in pursuit of a common objective to carry the personnel of London's industry and commerce in the most convenient and comfortable way.

Lord Latham concluded with a tribute to Mr. J. E. Cowderoy, Development Officer of London Transport Executive, who has retired after 48 years of service in passenger transport, and to Mr. J. H. F. Benford, who has relinquished the post of Commercial Manager, for reasons of health. Mr. Cowderoy, who is succeeded by Mr. G. J. Dickins, was actively associated in the efforts to stagger hours to improve travelling in the peak periods, and Mr. Benford, whose successor is Mr. D. McKenna, possessed great knowledge and understanding of the commercial problems of London Transport.

Co-ordination of Transport

OBJECTIVITY in considering the co-ordination of the different forms of transport is called for by Brigadier-General Sir H. Osborne Mance, Past President of the Institute of Transport, in a paper read at the recent inaugural meeting in Cambridge of the Bedford, Cambridge & Huntingdonshire Section of the Institute. Efficient transport operation, he emphasises, is independent of politics; the same technical problems exist under nationalisation as under private enterprise; and the results are measured in the same units. The leaders in each form of transport must study the proper function of each competing form, and a new generation of unprejudiced transport men must be bred and trained—which gives scope for the Institute of Transport. This, states Sir Osborne, applies not only to inland, but to the coming question of the due relation between sea and inter-continental air transport.

The question of monopoly *versus* competition is not necessarily that of nationalisation *versus* private enterprise. Railways once were largely monopolies, though privately owned; under the licensing system, road, and especially bus services, were partial or complete monopolies for public transport. Some degree of monopoly is essential to ensure balanced services, including a proportion of non-paying ones. On the other hand, competition is not and should not be eliminated when transport is nationalised. Sir Osborne Mance gives as an example the "C" licensees and short-distance road hauliers and the user's right, in this country, of choice of the means of transport. Competition between the means of transport, and not monopoly, must be the basis of transport policy.

On the assumption of a monopoly of nationalised transport and of competition between the different means of transport within that monopoly, he maintains that efficiency will depend on the way competition is established without restricting the technical development of the integration of those means of transport. Competition should be based on operating costs and on the service given, and not on competitive rates irrespective of costs. This necessitates a true comparison of operating costs, which must take into account the obligations imposed on some forms of transport, such as the railways' obligation to carry and to charge exceptional rates. How best to adjust inequalities between the forms of transport must be decided so as to determine correctly the best economic division of function between the forms. He has suggested that the costs of these obligations be borne by transport users in general, who benefit from the facilities whether they themselves normally use them or not.

To make nationalised transport, as a whole, pay its way, necessitates economies in operating which are effected by technical integration of the forms of nationalised transport so as to benefit by common national ownership. Whilst common ownership thus may help nationalised transport in the long run to compete with "C" licensees, Sir Osborne Mance thinks it of less importance in the allocation of function. Allocation cannot be done by decree; traffic must be influenced to use means of transport which will best benefit the transport undertaking as a whole by appropriate rate differentials and advantages of service, which, in Lord Hurcomb's words, leave the transport user "freedom of choice providing he pays the appropriate price for whatever he chooses." This is more definite than: "Encouraging traffic towards the service which can convey it most conveniently and economically."

If allocation of function is to be based on operating costs, *i.e.* on all costs except interest and maintenance charges for the track, the track element must be the same for all forms of transport; track costs must be pooled, which should apply equally to all transport, including the "C" licensee. This, he maintains, does not stop the user from choosing a dearer form of transport if he is prepared to pay more for a better service. The question can also be approached thus: At any moment the community has to bear the cost (interest and maintenance) of all tracks in existence at that time; as soon as this has been paid for, the relative cheapness, and therefore the basic charges, of the different forms of transport depends on the remaining, *i.e.* the operating costs. If this principle is accepted, its practical application depends on accurate assessment of charges. The track levy or toll, Sir Osborne Mance suggests, could be based on ton-capacity-miles, which can easily be determined for railways and inland waterways. For road transport, petrol rationing records (now discontinued) embody data sufficient for calculating track tolls in the form of a fuel tax adjusted to the petrol consumption of the vehicle.

Regarding road finance, Sir Osborne Mance points out that the British Transport Commission has to integrate transport, but without control over the "track" of road transport, and he outlines his proposals for a more equitable scheme of taxation and of payment for use of the roads on the assumption that roads are "part of the apparatus of transport and not a milch cow for general taxation." Provision of highways is a service to be paid for by ultimate users in proportion to the benefit obtained from use of the highway, and the benefit is assessed on the basis of ton-miles or passenger-miles of vehicles, or by alternative, but analogous, methods.

LETTERS TO THE EDITOR

(The Editor is not responsible for the opinions of correspondents)

Southern Region Pacifics

December 12

SIR,—In your issue for December 1, 1950, Mr. Saxby comments on "a recent article by a well-known writer in one of the modellers' magazines." While I admit the comments are "scathing," I would point out that they are direct mechanical criticisms of a piece of mechanism and might be valid for any mechanism designed for translating continuous rotary motion into planned reciprocating movement. A proper answer to the criticism of the valve gear would surely be to take offending comments and, convincingly, to prove them incorrect—on a purely mechanical basis.

This I, personally, cannot do, nor have I met an engineer, locomotive trained or otherwise, who can.

In conclusion, I would remind Mr. Saxby that the author of the comments, though a railway "modeller," is a practical "railwayman" of long experience and I and many other engineers will have the greatest respect for anyone capable of "shooting him down" on any question connected with locomotive design.

Yours faithfully,

J. E. LONSDALE, A.M.I.MECH.E.

38, Park House Gardens, Twickenham

Railway Charges, Efficiency, and Integration

December 16

SIR,—According to the report in your December 8 issue of Sir William Wood's paper to the Liverpool Economic & Statistical Society he gave "a timely warning regarding the use of efficiency statistics, which may lead to inferior service resulting in 'good' efficiency figures . . . ". In the same paper he stated: "The more traffic carried, the easier it is to spread (capital) and other fixed costs, as conditions during the war proved. Then, the railways carried the greatest volume of traffic in their history, the peak freight traffic in ton-miles was 50 per cent. greater than in 1938 and the passenger miles were 80 per cent. greater, but the freight engine-hours increased by only 33 per cent. and the passenger engine-hours decreased 16 per cent."

The year to which he refers seems to be 1944, I suppose the worst year in railway history in relation to inferiority of service—a striking example illustrating Sir William Wood's point about the influence of inferiority of service on statistics. At the same time the comparison with 1938 quoted above is falsified by Sir William Wood's own reasoning; the improvement in efficiency statistics was due, not to more traffic, but to inferiority in the quality of service.

Since Sir William Wood's address, I have once more carefully examined all the published statistics relevant to the efficiency question, from 1913 to 1949, and can find no general support for his theory that more traffic necessarily means greater efficiency. On the contrary, there is much support for the view that higher capacity wagons make a valuable contribution to improved operating efficiency. Higher capacity is usually expressed in terms of weight-carrying. What is needed also is greatly improved cubic-capacity per ton deadweight, gravely neglected on the railways, although on the passenger vehicle side, there has long been recognition of the necessity for adequate cubic capacity.

The closing of branch lines is only one aspect of the integration question: the economy is to be obtained not merely in the measurement of branch costs against branch revenue, but in the effect through the railway system of eliminating the transhipment, shunting, marshalling, poor loading of wagons and trains, and very low speed of movement, caused by the out-moded system of operating (*not* out-moded railways) perpetuated in the use of the railway, instead of the more flexible road vehicle, for undertaking feeder services.

It is my claim that the use of the road motor for these feeder services *universally* would permit a far better service than anything we have known; make possible the use of substantially higher-capacity wagons *universally* enable the railways to increase wages and improve conditions of service; and make the services of the British Transport Commission so good and economical that public transport need fear no rivals.

Yours faithfully,

FREDERICK SMITH

65, Hallowell Road, Northwood

Freedom of Speech

December 27

SIR,—The recent remarks by Lord Hurcomb on freedom of speech, restraint and discretion, referred to in your December 15, 1950, issue, may have cleared the air not only for many professional railwaymen, but also for amateur railwayists. There are many in the second category who, in the last three years, have been asked by technical and semi-technical organisations to lecture on railway topics. They have been preferred to the nationalised professional on the grounds—rightly or wrongly—that they will give an unbiased and uncensored point of view, whereas "the man from B.R. will, of course, have to toe the party line."

Whatever may be the shortcomings of British Railways, the serious amateur can have no complaint at the treatment he has received. Facilities non-existent to him before 1923, and given only sparingly during the grouping, have been made almost commonplace since nationalisation. In return, I am sure that we amateurs, given free speech, have in no way "let the side down."

I think that there is far more to free speech or the loss of it, than is conveyed in Lord Hurcomb's published remarks. There are surely many more sides to the problem than the giving of lectures or the daring expression of one's own opinion. Perhaps two simple examples will illustrate something of what I mean. In common with many who love locomotives, I frequently have a word with the driver. In the good old days, a free discussion usually ensued, but now a wary look often appears and my questions are often met with: "Who are you—from the Executive?" or "Are you a C.M.E. man?" On my explaining that I am but a State doctor, the tension eases, and remarks about the present system flow remarkably freely, in spite of the fact that I am assured that "you have to be very careful who you talk to these days."

Lunching at a railway hotel recently, I asked the cloakroom attendant how he was liking nationalisation. "Who are you, Sir?" I told him. "It's terrible, Sir, you never know who anyone is these days." Trivial examples in themselves, perhaps, but capable of multiplication many times to my knowledge. If this mentality can be engendered in three short years, in thirty years it seems possible that congenital deaf-muteness will be an accepted industrial disease in the nationalised industries! One wonders if the railways suffer from the same form of beastliness which assails at least a part of my nationalised and unhappy profession—the snoop. Let us get rid of it at all costs; it is un-English, it stops free speech, and by its very nature engenders "fiddles," deceit, and lying.

Let us strive to get politicians of all parties out of the nationalised industries and professions, and out of the trade unions too. Then we may have some real freedom of speech of the type the Briton has always been used to. Of course there are many men not pulling their weight, and of course there are many "higher-ups" afraid to say so. Of course there are many railwaymen badly underpaid when their jobs are compared with others, and nationalisa-

tion will never pay with so much bureaucracy, so many dead-heads, so many empty lorries charging along main roads, and so on. Let us have full freedom of speech in the nationalised industries, and stop being squeamish about telling a man what we think of him. But let us make two exceptions. Let us delete for ever from the English language two phrases, the first a piece of hysterical overstatement, "A magnificent job of work," the second the most treacherous expression of our time, "I couldn't care less."

Yours faithfully,
P. RANSOME-WALLIS

The Corner House, Herne Bay

French High-Speed Running

October 6

SIR,—May I point out a slight error in the caption under the middle illustration on page 310 of the September 22 issue of *The Railway Gazette*? The Est. 4-6-0 locomotives, which are now being fitted with Kylchap blast-pipes, successfully haul the rubber-tyre expresses between Paris and Strasbourg.

The Nord 4-6-4 locomotive has hauled a 567-*tonne* train up a gradient of 1 in 200 at 80 m.p.h. and can develop continuously 3,500 d.b.h.p. at 78 m.p.h.

Readers may be interested in the following table of the fastest runs on lines radiating from Paris, as from October 8, 1950:—

Between Paris and	Distances (miles)	Time (min.)	Average speed (m.p.h.)	Notes
Dijon	195·8	152	77·1	E
Rouen	86·7	75	69·4	R
Chaumont	162·7	145	67·3	D
Nevers	157·6	141	67·1	R
St. Quentin	95·2	85	67·1	R
Amiens	81·2	73	66·7	D
Poitiers	206·3	189	65·3	E
Bar-le-Duc	157·6	145	65·2	S

NOTES.—E: Electric; S: Steam; D: Diesel three-car set; R: Railcar

The rostered load for the 77·1 m.p.h. run from Paris to Dijon is 600 tons.

As regards long-distance running, the average journey time for all daily services between Paris and Nice—676 miles—works out at 13 hr. 38 min., or equivalent to nearly 50 m.p.h.—49·5 m.p.h. to be precise—for five services each way. Comment is unnecessary.

Yours faithfully,
VUILLET

58, Rue de Courcelles, Paris 8

Earning Power of the Railways

December 20

SIR,—In the first editorial note in your December 8 issue you made some criticism of an article in *The Railway Review* relating to the financial structure of the railway and its capacity, now and in the future, to earn the large sum necessary to pay interest on the existing capital following the operation of the Transport Act, 1947.

You charged the author with "muddled thinking" in relation to what constitutes a subsidy to an industry. May I suggest that if you had quoted at a greater length it would have been clear to your readers that what the article fairly attempted to convey was the necessity for an examination into the capacity of the earning power of the rail section of the transport industry, and for an amount to be fixed as a fair charge on the industry, any sums over and above that to be a charge on the Treasury. What is wrong with that as a realistic approach to a serious problem?

Surely, if it is morally right for Governments to make grants to assist industries under private enterprise, and when the benefit of such grants considerably helps the shareholders or producers, it cannot be morally wrong for working railwaymen to secure an examination into the financial side of their own industry to ensure that the present over-optimistic estimate of the earning capacity of the railways should be reviewed so as not to act detrimentally against the operation of fair wages and reasonable conditions.

There can be no doubt that, because the railways do not have a monopoly (which is accepted as public policy), and the facilities for securing "C" licences, it is unrealistic to believe that under the most efficient administration they can hope to secure sufficient passenger and freight traffic to earn the £40,000,000 a year for interest payments.

I was the author of the article, and, if I may say so, I think your writer was guilty of the term he applied to myself—"muddled (and unfair) thinking."

Yours faithfully,
H. W. FRANKLIN

6, Charles Street, Gloucester

[We are not in the least repentant; indeed, we feel that Mr. Franklin confirms the view we expressed. Any payment made by the Treasury to the British Transport Commission to make good a shortfall of revenue would constitute a subsidy. No question of morals was raised in our editorial note, which dealt merely with the facts of the position. The report of the British Transport Commission for 1949 shows that the gross receipts of railway passenger and freight services of British Railways amounted to £325,488,445. Therefore, to our mind, there is some very "muddled thinking" behind the statement "it is unrealistic to believe that, under the most efficient administration the railways can ever hope to secure efficient passenger and freight traffic to earn the £40,000,000 a year for interest payments." Perhaps, however, Mr. Franklin believes that the service of British Transport Stock, which is fixed in its remuneration, should rank after the wages bill, which is constantly increasing.—ED., *R.G.*]

Delayed Goods

November 13

SIR,—Although it is often claimed that the reason for retaining small railway wagons, and running very lightly loaded trains, is to provide efficient, quick and cheap transport, in actual practice the result has proved exactly the reverse. Our railway transport has long been recognised as the slowest and costliest in the world.

The reason is that the lines are so congested with little trains (said to exceed 40,000 a day) that they have to be side-tracked—often for an hour or more—at several stations *en route* to allow passenger and other more important trains, such as cattle, fish, etc., to pass. Hence their slow average speed of only 8 m.p.h., although their average load is only 150 tons, compared with 1,100 tons in the U.S.A., where the average speed is 23 m.p.h.

British and Continental railways thus run six or seven trains where the Americans run one, which, because it gets a clear road, attains a speed of 50 m.p.h. or more, and so runs little or no risk of being overtaken by passenger trains. As an example, Scottish traders and others are continually complaining that it takes upwards of a week to obtain their goods from London. They are carried (in 50-ton wagons) from New York to Chicago—900 miles—and delivered next day! Hence their rates are only about one-quarter of those in Britain.

Another point is that the time and expense of transferring goods from railway wagons to motor lorries, and *vice versa*, has been greatly exaggerated, especially when compared with the aforesaid delays to locomotive and train crews, and others, at several stations *en route*, and in the goods shed, sidings, and marshalling yards at the forwarding, receiving and intermediate stations.

If British and Continental countries adopted these American practices, all the cost of living—including food, coal, iron and steel goods, gas, electricity and building—would soon begin to fall, and all would be on the way to the prosperity attained by the U.S.A. and other North and South American countries, through very low transport costs.

Yours faithfully,
E. R. B. ROBERTS

Eynesbury, St. Neots

THE SCRAP HEAP

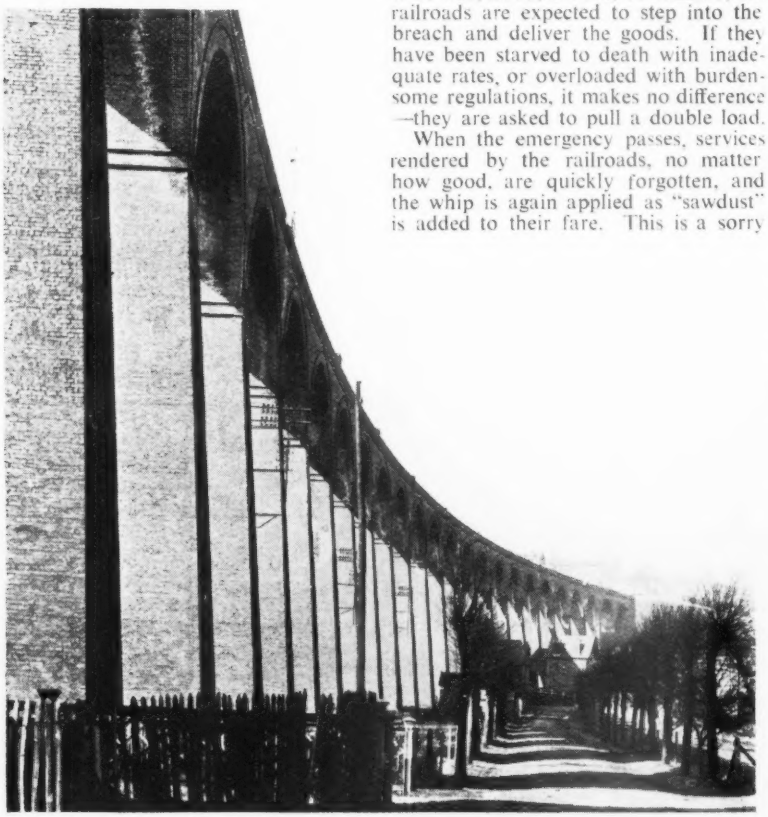
Realism in Modelling

Models of railway rolling stock sold in France attain a high degree of perfection. Recently, however, a new feature was noted in a Paris display window, where a series of scale model S.N.C.F. freight vehicles was painted a matt finish with extremely realistic "spillings" to represent flour, coal dust, lime, and so on. After all, who has ever seen a goods train in normal service with all the wagons looking as if they had just left the paint shop!

Another railway display, seen in a Paris toyshop some years ago, might aptly be described as a feature of a railwayman's nightmare. This consisted of a locomotive marked N.B.R., coupled to a P.L.M. coach, standing at a railway platform marked Ashey, at the end of which was a signal box marked . . . London Bridge! Readers outside the South of England may not all appreciate the added complication of Ashey being in the Isle of Wight!—H. A. B.

Statue to Locke in France

The town of Barentin, Normandy, is to erect a statue to Joseph Locke, the famous British railway engineer, who, over a century ago, built the viaduct carrying the Rouen-Le Havre line across the Barentin valley.



The viaduct at Barentin, Normandy, built by Joseph Locke, and carrying the Rouen-Le Havre main line (see paragraph above)

Photo Courtesy [French Railways

Spider Roundup at Halifax

Shaw Syke goods station, Halifax, recently received bananas from the British Cameroons, together with some unasked-for livestock. They are used to getting the odd spider among bananas at Shaw Syke, but when they get them about the size of a small crab, it is considered time to round them up.

Checker W. Broadbent was the man who herded ten of the larger specimens into a biscuit tin, sending them to Belle Vue Museum, Halifax. Two turned out to be cockroaches and the other eight "banana" or "crab" spiders. They are a poisonous variety, and, though not fatal to man, could certainly cause pain.

The Horse That Died

There is an old story about the stingy farmer who begrudged his work horse the oats it needed. He began to feed it a little sawdust with each meal. From week to week he increased the sawdust, while working the horse as usual. About the time he got the horse's rations down to practically all sawdust, it died.

This horse story makes one think of the treatment much American industry receives. Take railroads for example. There is continuous effort to cut their oats (their income). But let an emergency arise, and what happens? Whether it be war, flood, drouth, or blizzard, the railroads are expected to step into the breach and deliver the goods. If they have been starved to death with inadequate rates, or overloaded with burdensome regulations, it makes no difference—they are asked to pull a double load.

When the emergency passes, services rendered by the railroads, no matter how good, are quickly forgotten, and the whip is again applied as "sawdust" is added to their fare. This is a sorry commentary on human nature and illustrates the idea that gratitude is a lively appreciation of favours to come. —*From the "Globe-Times," of Bethlehem, Pa., and quoted in "Railroad Data," U.S.A.*

Littleborough Railway Enthusiasm

Residents of Littleborough, Lancashire, are keen railway enthusiasts and to meet their request the London Midland Region of British Railways has agreed to fix a plaque on the station front to commemorate the coming of the railway. The inscription reads:—

"The first section of the Manchester & Leeds Railway from Oldham Road, Manchester, to Littleborough was formally opened at this station on July 3, 1839. The summit tunnel was completed and the whole line opened for traffic on March 1, 1841. The Engineer was George Stephenson who attended and spoke at the opening ceremony."

Runaway Train

An empty passenger train without driver or fireman ran away from Palace Gates Station (Eastern Region) on January 1 towards Seven Sisters, passing two intermediate stations at low speed. Staff at Palace Gates telephoned down the line and the engine crew ran in pursuit. At Seven Sisters an acting foreman, Mr. George Buckland, jumped on to the footplate and stopped the train alongside the Palace Gates branch platform.

1951

Hail, little Babe of Time!
We wish thee well.
Events are on the move.
The magic spell
Of the unknown lies round
Us all today.
With whom is wisdom found?
Who knows the way?

Shall we go boldly on
With new designs?
Planning a comeback for
These well-loved lines,
Or shall we knuckle down
And shirk the test?
Resist th'encroaching hordes
Or give them best?

Here may the present quote
The glorious past;
Our fathers had their trials
And they stood fast.
It will not always rain,
There will be sun.
Meanwhile, let honour lie
In duty done.

Give us the tools, the men,
Leadership, too;
Give us the right ideas
To see us through.
Above all, give us faith
And iron will,
And British Railways shall
Be greater still.

A. B.

OVERSEAS RAILWAY AFFAIRS

(From our correspondents)

VICTORIA

New Suburban Coach

The new electric suburban coach, built at Newport Workshops, has been well received by passengers, who were invited to send in their opinions of it and suggestions that may be useful in building others of this type.

The coach, illustrated on page 488 of our December 1, 1950, issue, is being tried on some suburban lines; it has three compartments, one at each end for smokers and one in the centre for non-smokers. The three sliding double doors, on each side, provide an opening 4 ft. 5½ in. wide. There is accommodation for 73 seated and 67 standing passengers. Seats are transverse and longitudinal. The wide doors and the extra space between seats will greatly help mothers with prams in off-peak hours. There are also more racks for parcels and suitcases than in the existing stock.

The car is painted a bright red, with off-white for the window frames, and a 4-in. band running the full length of the coach below the roof. To minimise draughts, unbreakable glass partitions are mounted at the back of the seats near the doorways. The smoking sections of the new car have a new type of draught-free, rotary ventilator.

Brown Coal for Gas-Turbine Tests

Four tons of pulverised brown-coal dust from Yallourn, which are to be tested to determine its possibilities as a fuel for firing gas-turbine locomotives, have been shipped to the Bituminous Coal Research Committee, Baltimore, U.S.A., as foreshadowed in our issue of December 8, 1950.

Officials of the Locomotive Development Committee of the American coal research organisation consider that Yallourn pulverised brown coal dust should make ideal fuel for gas-turbine locomotives. If the tests are successful, ultimately the Victorian Railways may be able to buy gas-turbine locomotives fired with pulverised brown coal.

The Locomotive Development Committee, formed in 1944 as an agency of Bituminous Coal Research Inc., is composed of the chief executives of six leading American coal-carrying railways and three major coal producers. It was established to undertake the development of new locomotive power, which would use bituminous coal as its fuel and still meet the competition of the diesel engine.

The Bituminous Coal Research Committee is now in the last stages of preliminary tests with various types of American black coal. When they are finished, the experimental plant at Dunkirk, near Buffalo, will be closed. Two gas-turbine engines are being built for the road tests which will be conducted with pulverised black coal in 1951.

Victorian pulverised brown coal has been proved a good substitute for black coal as fuel for locomotives. After completing a series of successful tests, an "X" class engine, fired with brown coal dust, is now running three return trips a week (one passenger and two goods) between Melbourne and Seymour, 61¼ miles. The Victorian Railways propose to fit another goods engine with brown-coal-firing equipment imported from Germany. When sufficient fuel is made available by the State Electricity Commission, the Department will use each engine on a round trip per day hauling brown coal and briquettes between Yallourn and Melbourne (87½ miles).

ARGENTINA

Decentralisation of Administration

A petition has been presented to the Ministry of Transport for the transfer of the national railway administrations from Buenos Aires to points in the interior. It is suggested that the new headquarters of the General Belgrano Railway should be in Córdoba or Tucumán; the General Mitre Railway, in Rosario; the General Roca Railway, in Bahía Blanca; the General San Martin Railway, in Villa Mercedes; the General Urquiza Railway, in Paraná; and the Sarmiento Railway, in Toay. The Ministry announced some time ago that decentralisation of railway headquarters was one of its objectives.

Rules for Advanced Booking

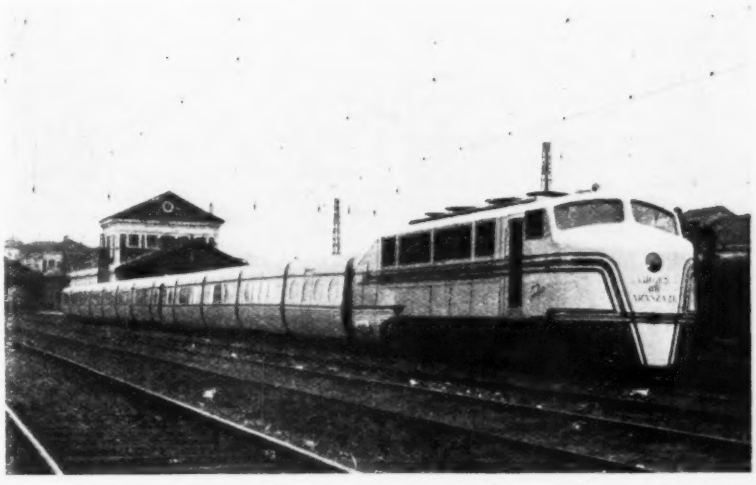
To eliminate speculation in the re-sale of tickets, a practice hitherto prevalent, the Ministry of Transport has issued a comprehensive set of rules laying down the procedure to be followed for booking in advance. Some of the principal features are the following: (*a*) only booking office clerks on duty may sell tickets, (*b*) no responsibility can be assumed by the railways for tickets not bought at official booking offices, (*c*) when necessary, tickets shall be issued in the name of the passenger who must produce proof of identity, (*d*) in the case of tickets being returned to the railway, a percentage of the cost will be refunded, ranging from 50 to 90 per cent., depending on the length of the period to elapse before the departure date, (*e*) in some cases, payment may be made at one station for tickets to be issued at another.

SWITZERLAND

Service Telephones in Swiss Trains

Drivers of railcars on certain electrified railways in Switzerland are now able to communicate by telephone with stations as well as with other trains. The system, worked out by the Hasler A.G. of Berne, has been introduced on the recently electrified lines from Le Locle to Les Brenets and La Chaux de Fonds to Les Ponts de Martel. With this system, the overhead traction cables also serve as telephone wires. The same system can also be used for telephone calls from one station to another. The cost of the installation and operation is said to be small, and the quality of the calls is not dependent on the weather or on topographical conditions. The experience which has been gained during

High-Speed Lightweight Train in Spain



Talgo train of the Spanish National Railways at Irun; it covers the 396 miles thence to Madrid in 8 hr. 55 min.

Photo Courtesy [*Notre Métier*

the first few months is reported to be fully satisfactory.

Successful Trial of Gyrobus

As reported in our July 22, 1950, issue, the first "Gyrobus," developed by the Oerlikon Company for kinetically-stored electric traction, is being tried out between Flüelen and Altdorf, where a tramway has been abolished. In trials lasting several weeks, the bus ran some 600 miles and conveyed more than 8,000 passengers. During this time, the current consumption and other features were under constant observation. The results are said to be fully satisfactory to the public, the authorities and the manufacturers.

FRANCE

New Freight Rate Plan

Important changes in railway freight rates are proposed by the S.N.C.F., subject to approval by the Supreme Transport Council. At present, uniform freight rates are applicable to all lines. In future the S.N.C.F. would have power to charge rates between a fixed maximum and minimum for a given tonnage by negotiation with clients. For instance, rates for transport of coal may be varied according to the tonnage. Transport on the main lines, which carry 80 per cent. of the S.N.C.F. traffic, is also to cost less than on unprofitable branch lines, which carry only 20 per cent. of the rail traffic. In application of this principle, each station will be given an index to be taken into account in calculating transport costs.

In practice, says the financial journal *L'Information*, prices will be 12 to 15 per cent. less between two large stations than between two small stations. This, it adds, is a first step towards cutting the national railway system into two unequal zones, one comprising profitable lines and the other the unprofitable secondary lines, where responsibility for the deficit will weigh more and more on the State and local communities.

REUNION

Secondhand Equipment

The system has received steam locomotives, goods wagons and rails from the Departmental Railways of La Vendée, in Metropolitan France. These became redundant when all services in the La Roche-sur-Yon, St. Fuljan-les-Herbiers, and Chantonnay districts of La Vendée were turned over to road transport.

There are 78 miles of metre gauge line in the island.

WESTERN GERMANY

Basle-Mannheim Line Doubling

In 1946, the French occupation authorities ordered the dismantling of one track on the 33-miles Denzlingen-Offenburg section of the Basle-Mannheim main line. The rails were used for the repair of French railways. In 1948, permission was given for the restoration of the second track, and work was begun at once. The opportunity was taken to improve the alignment and the layout of several stations, as well as the signalling installations; a modern signalbox was installed at Lahr-Dirglingen. Provision was made for the proposed electrification of the line.

The new northbound track consists mainly of 60-metre (197 ft.) rail lengths, obtained by welding two 30-metre rails. This gives most comfortable riding. The principal new engineering work is a new double-track bridge over the River Kinzig south of Offenburg, which replaces a temporary single-track bridge built in 1945. The new bridge, which weighs 800 tons, was assembled by the side of the old bridge and moved into position during a three-hour possession during the night of October 1-2, 1950. Three other new bridges had already been completed a few months earlier. The works extended over two years and have cost some DM.7,000,000.

NORWAY

Facilities for Tourists

A comprehensive scheme to attract foreign tourists to Norway for the winter season is now in operation. Within the framework of the scheme, which comprises rail, road, and air transport, and coastal shipping, the State Railways grant fare reductions up to 30 per cent. to all tourists staying in Norway at least six days and patronising hotels which accord tourists reductions of 10-20 per cent. in their prices. Bus undertakings and the Scandinavian Airlines System grant reductions of 30 per cent. in certain fares, and coastal shipping concerns allow rebates of up to 33 per cent.

Publications Received

An Introduction to Railway Architecture. By Christian Barman. London: Art & Technics Limited, 58, Frith Street, W.1. 8½ in. × 6¾ in. 104 pp. Illustrated. Price 15s.—The author modestly calls his work only "an introduction," but other writers whom it may inspire may delve more deeply into aspects and examples of this fascinating but hitherto curiously neglected subject, yet find it hard to emulate his style. The text is in the form of a long essay, which might be sub-titled a study in stations. Mr. Barman sees the early railway architects faced with the greatest challenge to builders since the days of the cathedrals. Few will dispute his claim for John Dobson as "the greatest of all railway architects" and Newcastle Central—his *chef d'œuvre*—as the "crowning achievement of British railway architecture." The charming work of David Mocatta in his experiments in standard planning of wayside stations on the Brighton line is paid due tribute. As the arcaded fronts of the early London Electric Railway stations marked a return to the screen façade, of Cambridge and Holborn Viaduct, so, more recently, has the Underground recalled an earlier idea, exemplified by the Great Hall of Euston, in its outer, enclosed concourses at Arnos Grove, St. Johns Wood, and elsewhere. The author recognises that a complete survey would have to include bridges, viaducts, retaining walls, locomotive sheds, carriage interiors, and so on, but within the strict limits he has set himself, he has achieved an admirable purpose. The text is illustrated by reproductions of 125 photographs of stations large and small, amply representative of all styles ranging over a century-and-a-quarter.

Locomotive Stock Book, 1950.—Cheam, Surrey: Honorary Publications Officer, The Railway Correspondence & Travel Society, 18, Holland Avenue. 8 in. × 6 in. 63 pp. + 24 pp. plates. Paper covers. Price 10s.—The last "Locomotive Stock Book" was produced when the four main-line groups lost their separate identities. The present publication therefore covers the first two years of nationalisation. All locomotives in service on British Railways at the end of 1949 are listed under their respective wheel types, with a further sub-division into classes in numerical order. The general layout otherwise follows previous editions, with complete classified lists (including names), and alterations to locomotive stocks in 1948 and 1949, of British Railways, London Transport, the Irish railways, and minor British lines. There are also short reviews of British locomotives, 1948-49, with summary tables, a list of preserved locomotives and details of the renumbering of W.D. 2-8-0 and 2-10-0 locomotives. Seventy-eight illustrations depict all the classes which became extinct during the two-year period.

Structural Steel Design.—Further examples of structural steel design to conform with the requirements of B.S. 499, 1948, are contained in publication No. 2, 1950, issued by the British Constructional Steelwork Association, Artillery House, Westminster, S.W.1. The brochure contains many useful data relating to the design of structural steelwork and is illustrated by diagrams and a schedule of symbols used in the formulæ. Publication No. 1, 1950, was reviewed in our issue of September 8, 1950.

Skefko Ball Bearing Journal.—The first issue of a new quarterly publication dealing with anti-friction engineering has been published by the Skefko Ball Bearing Co. Ltd. This is illustrated by graphs and half-tone illustrations and deals with research into race pressures and power consumption in the hot rolling of steel strips. Also included is a description of a diesel rail motor coach which was demonstrated in Chicago in September last year, as well as particulars of electric locomotives supplied to the Chilean State Railways.

Railway Developments in Argentina—1

Proposed gauge standardisation and increasing trend towards diesel haulage

(By a Correspondent)

IT will soon be a hundred years since the first concession was granted for the construction of a railway in Argentina. Today, with nearly 27,000 miles of railways, Argentina has the largest railway system in South America, computed in 1934 as being 38 miles to 10,000 inhabitants. No part of the rich farming lands of the Province of Buenos Aires (extending to nearly 119,000 sq. miles) is more than 25 miles from a railway.

When the first railway was opened in 1857 the population was about 1,800,000, but by the time railway development was halted by the first world war it had increased to 8,000,000. Shortly after the signing of the agreement for the transfer to Argentina of the British-owned railways in 1947, the population was 16,000,000, and it is estimated that if the present rate of immigration is maintained at least a further 2,000,000 may be added in the next 10 to 15 years. The population will therefore have increased tenfold in the hundred years since the American, W. Wheelwright, with the assistance of British capital, opened in 1864 the first section of what eventually became the Central Argentine Railway. The part played by British capital and equipment in the opening up of the country is well known.

That the transfer to Argentine ownership of the large portion of the railway system which had been British-owned before 1947 would involve changes was to be expected. These changes have taken place. A co-ordinated structure including all transport has been set up by the Ministry of Transport. It should prevent the uneconomic competition which hampered the development of some of the railways under private ownership.

It had often been claimed that the diversity of gauge was detrimental, and one of the first problems studied after complete nationalisation was that of gauge standardisation, on which a committee was appointed to report. The structure of the railway system at the time, after some re-grouping and transfer according to gauge and zones served, was as follows:—

Railway		Gauge				Totals	
Old name	New name	0·750 metre	1·000 metre	4 ft. 8½ in.	5 ft. 6 in.	Km.	Per cent.
				Lengths in km.			
Buenos Ayres Great Southern	General Roca	510	—	—	8612	9122	21·29
Buenos Ayres & Pacific	General San Martin ...	—	178	—	4700	4878	11·39
Central Argentine ...	General Bartolome Mitre	—	—	—	6297	6297	14·70
Argentine State ...	General Belgrano ...	78	14·445	—	—	14·523	33·91
Entre Rios, and Argentine North Eastern ...	General Urquiza ...	—	—	3360	—	3360	7·84
Buenos Ayres Western	Domingo Faustino Sarmiento	—	—	—	3896	3896	9·09
State Railway (Patagonia)	Patagonico	267	—	—	495	762	1·78
	Total, km.	855	14·623	3360	24·000	42·838	100
	Percentages ...	2·0	34·14	7·84	56·02		

After analysing the carrying capacity of the railways the committee found that the superiority of the broad gauge had been well established, but from the aspect of gauge standardisation, and particularly as regards connections with neighbouring countries, the metre gauge was the most convenient, and the recommendation made was that the 4 ft. 8½ in. gauge should be abolished. Provisionally, it was suggested that only the metre gauge and broad gauge be retained, and the following programme was proposed:—

I.—Lifting of branch lines crossing main flow of traffic. Embankments, bridges, etc., to be retained with a view to subsequent use as roads.

II.—Certain metre-gauge branch lines to be converted to broad gauge. This affects some metre gauge lines which competed with broad gauge.

III.—Standard gauge to be converted to metre gauge.

Although these proposals are not as far-reaching as had been expected in some quarters, the first two should be beneficial, but the third could be undertaken only as a long-term policy.

Fuel Supply

A study of the future of the Argentine railways must consider the fuel situation. Before the last war Argentina imported from 2,500,000 to 3,000,000 tons of coal a year, or about 30 per cent. of the total fuel of all kinds used in the country. Of this, about 70 per cent. came from Britain, and of that about 1,000,000 tons a year was used by the railways.

The effects of the war on the fuel supply of the country and its influence on the policy now being pursued in railway matters are not fully appreciated outside Argentina. In 1937 Argentina imported coal to a total of 3,164,000 tons, of which 2,300,000 came from Great Britain. The worst of the war years was 1942, when only 560,000 tons were received, and even then Britain supplied 240,000 tons and the United States 200,000 tons.

FUELS USED ON A PERCENTAGE BASIS

Railway	Fuel	1939/40	1940/41	1941/42	1942/43
Central Argentine	Coal	98·6	42·5	30·5	6·9
	Petroleum	—	13·1	11·5	11·9
	Wood, etc.	1·4	44·4	58·0	81·2
Buenos Ayres & Pacific	Coal	81	60·2	31·5	9·8
	Petroleum	19	26·2	20·7	13·7
	Wood, etc.	—	13·6	47·8	77·3

The above figures for only two of the broad gauge railways indicate what was involved when a planned fuel policy had to give way to expediency.

Locomotive operating costs increased considerably, due mainly to fuel, and on one of the broad gauge railways it was stated that although the cost of materials used had increased by 52 per cent. in the four years under review the cost of fuel per locomotive mile had increased by 127 per cent. The change from coal to wood fuel affected locomotive operation considerably. With 4 tons of wood fuel of 3,500 calories necessary to do the work of one ton of Welsh coal of 8,000 calories it is not surprising that train loads and speeds were reduced by 20 per cent. More frequent re-fuelling called for loading stations every 62 miles compared with 250 miles with coal. In addition, impaired locomotive performance caused service dislocation requiring double heading, relief services and even division of trains. Supplies of oil fuel were strictly rationed by the Argentine Government.

The wartime difficulties with fuel supplies naturally gave impetus to the demand for further development of the oilfields in the country, the production from which had increased by 100 per cent. in the 10 years up to 1939, when total production was 3,000,000 cu. metres. At the time this was stated as satisfying only about half of the country's requirements.

There is a decided drive towards the more economic use of fuel, and even the farmer and road transport operator are being urged to change from petrol to diesel power, and the motorist to use lower-powered cars. It is not surprising therefore that in a country which had to depend so much on overseas

sources for steam locomotive fuel, and where there are oilfields capable of further development, that the present-day emphasis should be on diesel traction. The Argentine Minister of Transport is reported to have said that the future lies in electrification and diesel power. Orders have been placed in the U.S.A. for a further 73 diesel locomotives.

Industrial Development

Another factor which will influence the choice of future motive power is industralisation. In 1914 only about 600,000 h.p. was used in industrial establishments whereas in 1935 this had risen to 2,600,000 h.p. and the value of the raw material processed had risen by 100 per cent. Between 1935 and 1942 the value of industrial production had again doubled and this trend is still increasing.

Movement of population to the industrial areas has caused an increase in the volume of railway passengers but a reduction in the average length of journey. In 1944-45 it was estimated that 234,000,000 passenger journeys were made on the suburban services, compared with 31,000,000 journeys on the general passenger services. Of the suburban passenger journeys 87 per cent. of the total were carried by the four broad gauge railways. The State Railways carried 34 per cent. of the general passenger total of 31,000,000 and the broad gauge railways 57 per cent.

Whatever may be the trend in purchasing power of the Argentine peso in the future it can be safely assumed that the railways will have to handle as much as 60 per cent. more passenger traffic in the next ten years. The increase in goods traffic is put at about 33 per cent.

The influx of population to Buenos Aires and the surrounding areas has created a problem to which the answer must eventually be electrification of surface lines and further extension of the underground railways. Claims have been made that dieselisation of the suburban sections of the railways now using steam power would involve a lower capital outlay, but while diesel traction may give immediate relief, it is considered that the final solution must be electrification.

Buenos Aires Electrification

Before the sale of the British-owned railways, schemes had been prepared for the electrification of the suburban services of the former Buenos Ayres Great Southern Railway and also for electrification of the local section of the former Buenos Ayres and Pacific Railway as a part of the former Central Argentina Railway electrified suburban system.

Any scheme of electrification of the surface railways in Buenos Aires must fall in with the future development of the city, where the existence of over 200 level crossings has caused serious complaints, and it has even been suggested that the railway stations should be removed from the central zone of the city.

In 1941, Professor A. P. Farengo, read a paper before the Institute of Transport in Buenos Aires which set forth comprehensive and even revolutionary proposals for the reorganisation of the railway traffic in the city. His main proposals were:—

Scheme No. 1

Grouping of all railways in trunk lines common to two or more railways and the use of the existing stations of what are now the General Bartolome Mitre, General Roca, and Domingo Faustino Sarmiento railways. The scheme involves lifting 51 miles of line, eliminating 201 level crossings, and closing 37 stations or stops within the capital. The existing underground railways would be extended by 22 miles.

Scheme No. 2

This proposal comprises the lifting of the major portion of the stations within the capital including the terminal station of the General Bartolome Mitre Railway and the elimination of 54 miles of track and 39 stations and stops. All the passenger services of the General Belgrano, General Bartolome, Mitre, Domingo Faustino Sarmiento and General San Martin railways would be concentrated in two new stations on the Avenida General Paz, which runs round the outskirts of the city. This scheme also provides an extension of 24 miles to the underground railways.

Scheme No. 3

This proposes the removal of all stations and lines within the city except those giving access to the port. This is much the same as scheme No. 2 except that it involves the transfer of the terminal station of the General Roca system (Plaza Constitucion) to Avellaneda on the other side of the river Riachuelo. The network of subways would include a line under the Riachuelo to give access to the new terminus of the Roca system.

The author of these proposals estimated the cost, at 1940 prices, as:—

—	Scheme 1	Scheme 2	Scheme 3
Railways	$80,000,000	$91,000,000	$74,000,000
Underground	$175,000,000	$193,000,000	$225,000,000
Totals	$255,000,000	$284,000,000	$299,000,000

The estimated cost of these proposals would be substantially increased at present day values. Although these are ambitious schemes, they indicate the line of thought amongst Argentine engineers, and it seems certain that some scheme of traffic reorganisation will be undertaken.

DOCKS & INLAND WATERWAYS EXECUTIVE: CHAIRMAN'S NEW YEAR MESSAGE.—Sir Reginald Hill, Chairman of the Docks & Inland Waterways Executive, in his New Year message says that the Executive is entering on its fourth year. Behind it lies a period which has necessarily been devoted largely to taking over and reorganising the various undertakings committed to it. This has been a gradual process which will reach virtual completion by the end of the current year. Many of the undertakings which passed to the Executive were in poor shape after the war. Furthermore, the docks and waterways of the British Transport Commission were, as a whole, being worked at a heavy loss. Year by year this loss has been reduced, and when the final results for 1950 are ascertained, it will be found that again great progress has been made. Up to now the Executive has given priority in the allocation of the resources at its disposal to the making good of arrears of maintenance work and replacement of worn-out equipment, and there is still much to be done in this direction. This has not, however, prevented it from preparing to modernise and improve, as well as mend and replace. Plans are being made and are in some cases completed, for the development of resources and facilities, so that the undertakings may be well equipped to serve the community and to afford good conditions for those who work in them. The emphasis now must be shifted to provision for the future.

It is the duty of the Executive, says Sir Reginald Hill, to lead, and to see that the efforts of its employees are well directed and properly supported. In the long run, however, it is the duty of the employees individually and collectively to make a success of the national organisation of docks and inland waterways.

DEVELOPMENT AT PORT ELIZABETH.—Faced with a constantly growing volume of traffic, the railway administration had concentrated on improving efficiency and raising carrying capacity, said Mr. Heckroodt, General Manager of Railways, when he opened the new good sheds at Port Elizabeth harbour recently. Mechanical handling, he said, was being expanded, including the expenditure of over £20,000 for fork-lift trucks at the harbour alone. Claims for loss and damage of goods in transit had fallen by 18·4 per cent. during the first six months of the present financial year.

In remarkably short time Port Elizabeth had become one of the main industrial centres. The Administration was alive to the problems of commerce, and steps had been taken to improve services and remove causes of dissatisfaction. Marshalling yard improvements were being carried out at various centres, and a start had been made on regrading the main line between Alice and Naauwpoort, but the programme for this area was far more comprehensive. The New Brighton marshalling yard was really the key to better railway working in the Port Elizabeth area.

NATIONAL SCRAP DRIVE.—The President of the British Iron & Steel Federation, Sir Ellis Hunter, the President of the Joint Iron Council, Mr. F. Scopes, and the President of the National Federation of Scrap Iron, Steel, & Metal Merchants, Mr. R. Urquhart, have addressed a circular letter to 15,000 users of iron and steel in this country, emphasising the need for saving and collecting scrap, and drawing attention to the role of the Joint District Scrap Committees. A special approach is being made to the services, public undertakings and municipal bodies. Government departments, and through the Federation of British Industries, to industry as a whole.

Locomotives for Industrial Purposes

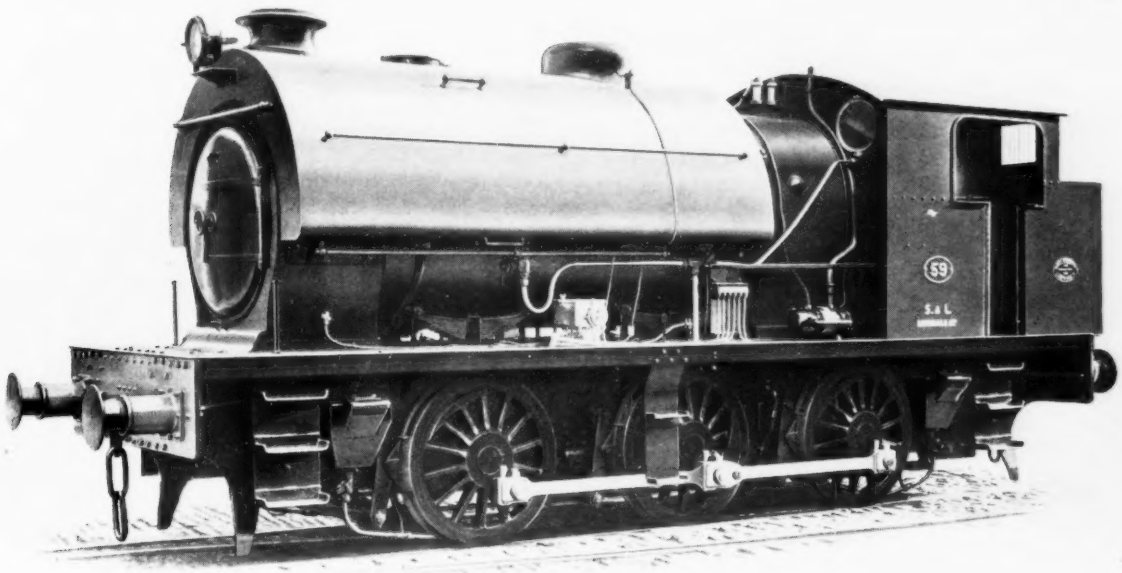
Designed for work in ironstone mines

THE first of an order for seven locomotives ordered by Stewarts and Lloyds (Minerals) Limited has recently been completed at the Newcastle-on-Tyne works of Robert Stephenson & Hawthorns Limited. These locomotives, designed specially for service in ironstone mines, are fitted with an all-steel boiler having girder stays and a raised outer firebox shell. Included are two horizontal No. 8 injectors fitted under the tanks, two Ross pop safety valves, and a 12-feed mechanical lubricator; the boiler is insulated by magnesia slabs.

The locomotive is of the 0-6-0 type and fitted with inside cylinders of close-grain cast iron, 18 in. dia. × 26 in. stroke, the slide valves being actuated by Stephenson valve gear; all motion parts are forged from the solid. The engine is fitted with both steam and hand brakes, standard buffers and drawgear, rail washing cocks, and four-bar slidebars. The crankpins, valve gear pins, and spring pins are of nitralloy steel and the connecting and coupling rods, forged from the solid, are fitted with oil-lubricated gun-metal bearings. A turbo-generator is included for supplying lighting to two headlights and engine cab. The locomotives are numbered 56 to 62.

The principal dimensions of the locomotives are as follow: —

Gauge	4 ft. 8½ in.
Cylinders (inside)	18 in. by 26 in.
Wheels	4 ft. 0½ in.
Wheelbase	12 ft. 0 in.
Boiler pressure	180 lb. per sq. in.
Heating surface	1,140 sq. ft.
Grate area	18 sq. ft.
Tractive effort at 85 per cent. boiler pressure	26,574 lb.
Weight in working order ...	52·75 tons



Locomotive designed for ironstone mine working

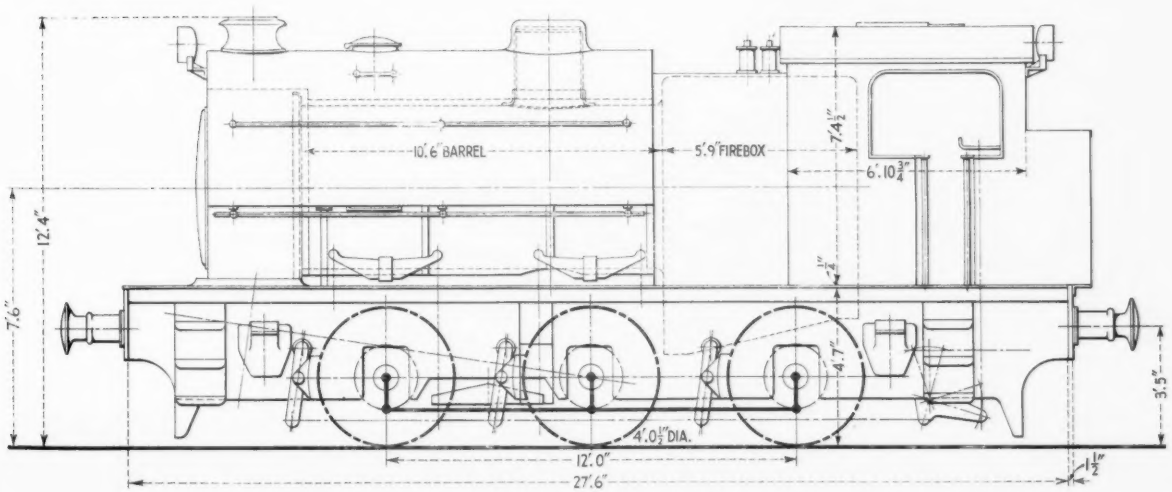


Diagram showing principal dimensions of the locomotive

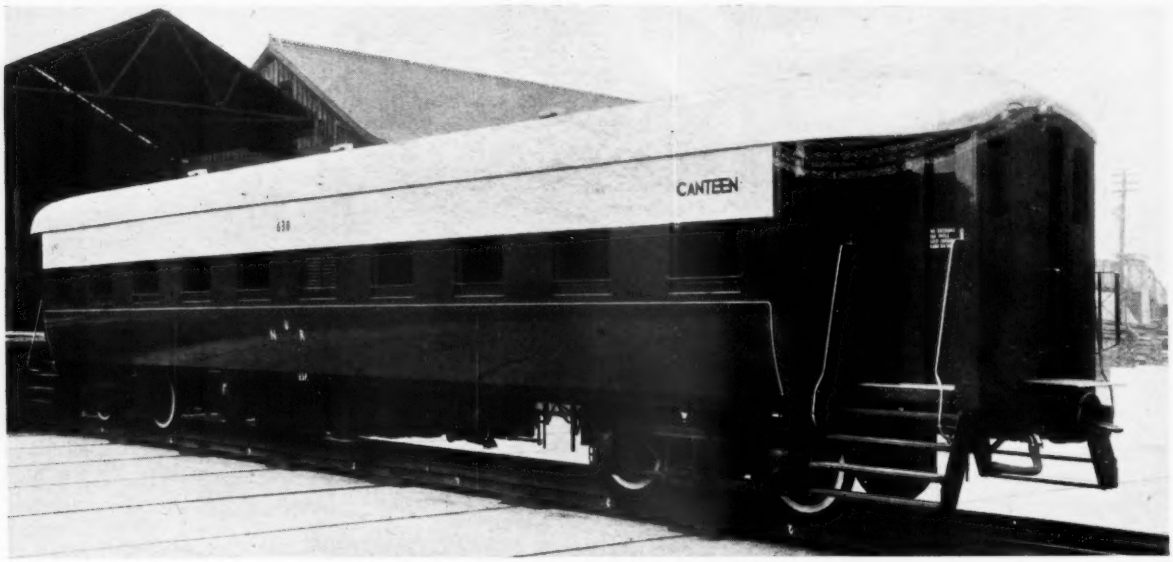
Rolling Stock for Nigerian Railway

Sixteen composite third class and canteen coaches for service on long-distance trains

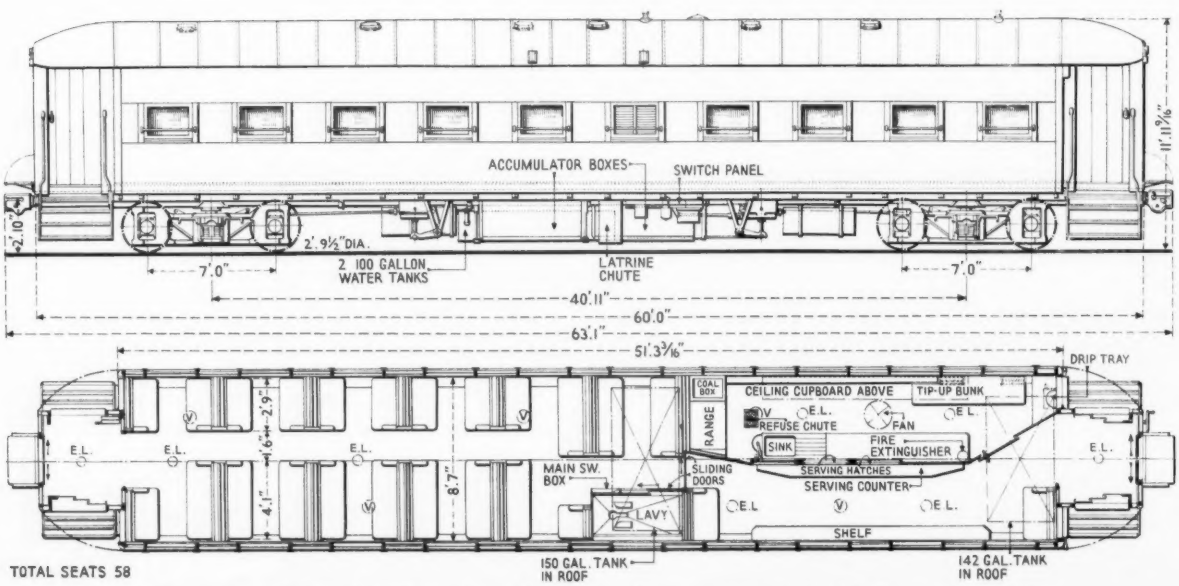
THE completion of the heavy building programme of carriages and wagons required by the Nigerian Railway, referred to in our January 13, 1950, issue, when we described and illustrated the third class all-steel bogie carriages then under construction at the works of Cravens Railway Carriage & Wagon Co. Ltd., Sheffield, has been further implemented by the construction of 16 composite third class and canteen bogie all-steel coaches.

These carriages, which are being built by the same firm, are in exterior appearance generally similar to the third class carriages, except that, to give an unobstructed gangway and so avoid congestion in the end vestibules, the side entrance doors are arranged to slide. Each door comprises three sliding leaves constructed of folded steel sheet, arranged to slide behind each other so that the maximum clear doorway opening is obtained. The body framing, underframes, brake gear, bogies, and electrical equipment are also similar to the third class.

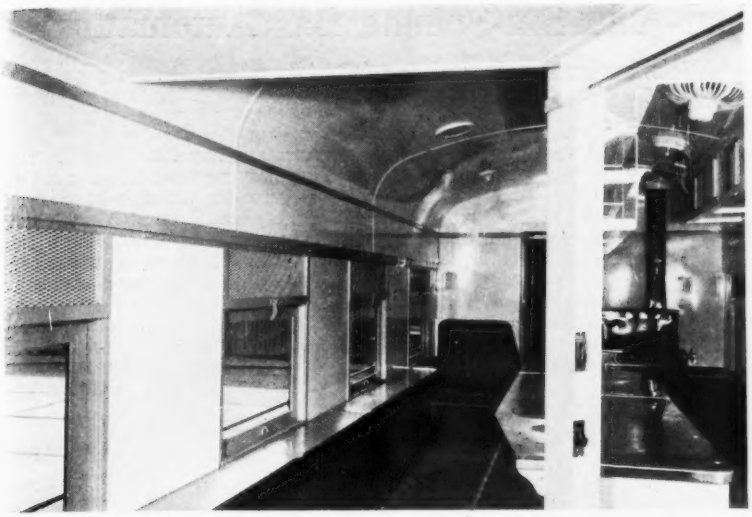
A kitchen compartment with serving hatches opening into a wide service corridor has been arranged at one end to enable the third class passengers to obtain buffet refreshments on long journeys. Seating accommodation for 58 passengers is provided in an open saloon at one end of the carriage, the canteen compartment occupying the



Nigerian Railway, composite third class and canteen coach



Diagram, with principal dimensions, showing seating arrangements and buffet compartment



Canteen corridor and kitchen compartment

remainder of the coach. A stainless-steel topped serving counter is arranged below the serving hatches, and a stainless-steel sink, metal cupboards, and drawers are provided. Racks for storing kitchen utensils are fitted over the hatches, whilst a row of cupboards extends the full length of the kitchen above the bodyside light openings. A stainless-steel topped shelf is also provided at a suitable height on each side of the corridor adjacent to the kitchen for the convenience of passengers using the canteen.

Since good drinking water is obtainable only at certain places en route, the normal drinking water storage capacity has been increased by a further 150-gal. tank in the roof space over the end vestibule, and two 100-gal. tanks slung from the underframe. The water is supplied to the kitchen by handpumps.

Cooking and water heating facilities are provided by a 30-in. New Anchor cooking range with water boiler. Suitable insulation is fitted to the partitions in the vicinity of the stove to insulate the coach bodywork, and an electric fan is provided in the ceiling for the benefit of the kitchen staff. An attendant's bunk is provided in the kitchen compartment and is arranged to fold back when not in use.

The passenger compartment and canteen corridor are painted brilliant green from floor to waist, pale cream from waist to cantrail, and very pale cream ceiling panels. The seat frames, window frames, and mouldings are picked out in apple green and the seats are upholstered in brown Vynide. The kitchen compartment is painted golden yellow from floor to waist, deep cream from waist to cantrail, and very pale cream for the ceiling. Mouldings, window frames, and kitchen cupboard units are also in golden yellow. The stove is black and the Terrazzo floor has a yellow composition to match the general colour scheme.

These coaches are shipped whole, painted, lettered, and ready for service, and are constructed to the requirements of Mr. T. B. Welch, Chief Mechanical Engineer, Nigerian Railway, and under the supervision and inspection of the Crown Agents for the Colonies.

The leading dimensions of these cars are as follow:—

Length over buffers	63 ft. 1 in.
Length over body	60 ft. 0 in.
Width at waist	9 ft. 2 in.
Bogie wheelbase	7 ft. 0 in.
Height from rail to top of roof ...	12 ft. 0 in.

Principal Sub-contractors

The following firms, as sub-contractors, supplied fittings and materials for the new cars:—

Twinberrow bogies ...	G. H. Sheffield & Co.
Automatic brake equipment	Vacuum Brake Co. Ltd.
Wheels and axles ...	Owen & Dyson Limited
Non-Shock couplers ...	A.B.C. Coupler & Eng. Co. Ltd.
Ventilators	Monarch Controller Co. Ltd.
Steel sheets	John Summers & Sons Ltd.
Metallic fittings ...	John Levick Limited
Sundeala panels ...	G. D. Peters & Co. Ltd.
Tubular seat frames ...	Deans & Son (Yorkshire) Ltd.
Roof insulation	J. W. Roberts Limited
Glass	Pilkington Bros. Ltd.
Vynide leather cloth ...	Imperial Chemical Industries Limited
Electric lighting ...	J. Stone & Co. Ltd.
Beclawat Metalouvres ...	Beckett Laycock & Watkinson Limited
Alpax castings	Lightalloys Limited
Pressure filters for drinking water	Berkefeld Filters & Water Softeners Limited
Blockboard partitions ...	Saro Laminated Wood Products Limited
Kitchen range and boiler	Smith & Wellstood Limited
Kitchen cabinet units ...	Crittall Kitchen Equipment Co. Ltd.

Showing the interior of the kitchen

A New Series of Four- and Six-Spindle Bar Automatics

Incorporating Wickman patent autosetting providing infinite variation of feed strokes without cam-changing

A NEW series of four-spindle and six-spindle automatics with capacities of 3½in. and 2⅝in. dia. bar respectively has been developed by A. C. Wickman Limited, Coventry. The series is designed on basically similar lines to the five-spindle range, but is of much larger and heavier construction, embodying many improvements and refinements for the heavy work such machines are required to perform. They offer particular advantages where heavy metal removal, extreme accuracy, and fast output on long or short-run batches are required.

The incorporation of the Wickman patent autosetting mechanism, which effects alterations to tool feed strokes and bar feed without cam-changing and yet leaves unaltered the full fast approach stroke, simplifies setting-up and reduces changeover time, and also dispenses with costly interchangeable cams.

Mechanism Control

The mechanism controlling the movement of the main tool slide, and the two auxiliary slides when fitted, is mounted above the drive housing. A transversely mounted camshaft carries fixed cams and the quadrant linkage mechanism. Rapid and accurate setting of feed strokes for end-working tools is accomplished by sliding the setting blocks along the graduated scales fitted to the quadrant. Tool strokes are set precisely, no further adjustments being necessary.

The centre block and auxiliary slides are actuated by pusher-racks to which the motion of the quadrants is transmitted by racks and pinions, the quadrants receiving their motion from the standard cams. The fast return and approach motion is controlled by other cams on the same shaft. Similar mechanisms control the movement of the cross-slides, adjustments to feed strokes being effected by sliding blocks on quadrants readily accessible and adjacent to both lower cross slide positions.

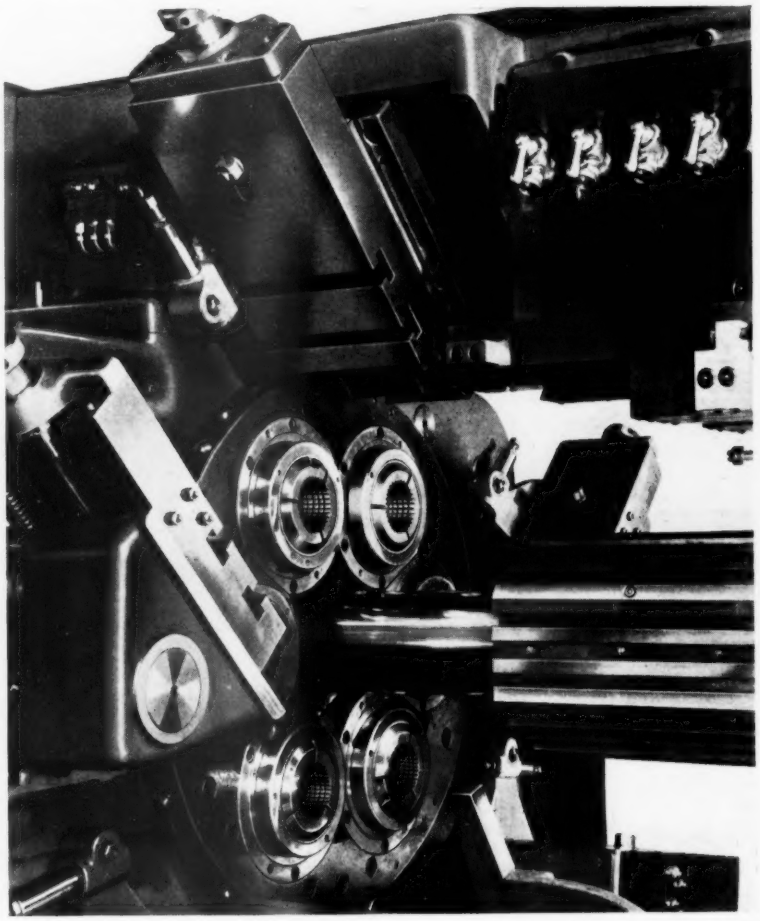
The frame comprises the base and chip pan, and drum and drive housings across which is bolted and dowelled the beam to form a closed frame of exceptional stiffness. Ample coolant and chip space is provided by the large open-type pan which is heavily ribbed underneath. The design and weight of the main frame assures the utmost rigidity and freedom from vibration under the heaviest cutting loads. Ample power allied to the rigid construction of Wickman four-spindle and six-spindle automatics enables the fullest advantage to be taken of the faster metal-removal capacity of modern carbide tools.

Power up to 40 h.p. is available from a protected type motor mounted on a hinged platform at the rear and controlled by stop-inch-start buttons mounted in convenient positions at the front and rear of the machine. The drive is transmitted from the motor to the constant speed shaft by heavy V-belts.

From the constant-speed shaft a second shaft is driven by range gears to provide high-speed and low-speed ranges, individual speeds being obtained by means of pick-off gears. Drive for the coolant and oil pumps, and the high-speed clutch which is engaged during all non-productive movements of the machine, are also taken from the constant-speed shaft. A central shaft passes through to the spindle drum to drive the spindles.

From the central shaft are also driven the feed drive which controls the production cycle time, and the various standard and special end-working attachments. The feed drive consists of a primary reduction, two pairs of pick-off gears for variation of the cycle time, safety clutch, and a roller-type overrun clutch built with the slow side of the fast and slow clutch which controls the non-productive and productive portions of the cycle of operations. Drive is further transmitted by safety clutch and the power feed clutch, arranged with a brake and interlocked with the hand-winding mechanism. The two safety clutches are rated to protect the mechanism of the machine during feed and fast-motion operations respectively.

All speed drive gears and feed gears are made from heat-treated alloy steel, the speed drive gears being profile ground. Worms are nickel steel case-hardened and ground, and worm wheels are centrifugally cast phosphor-bronze. All sliding gears are mounted



Tooling area on the Wickman six-spindle automatic in which the centre block and two independent longitudinal slides provide ample accommodation for complex tooling

on splined shafts and pick-off gears are keyed on taper shafts. All fast-running power shafts are carried on ball and roller bearings.

High-tensile spindles are carried on precision pre-loaded anti-friction taper bearings and fitted with hardened collet seatings. The draw-back collets are operated by a spool on each spindle through normal fingers and springs which compensate for variations in bar size. The spindle drum is made from high hardness seasoned cast iron, and is produced to the highest standards. The hardened locator pieces by means of which the drum is positioned at every index are ground to a maximum permitted tolerance of 0·0002in. for spacing; bores for spindle bearings mechanisms when setting up, enabling repeated trial cuts to be made at individual stations.

In addition, a stop ring is fitted at the front of the spindle drum, with individual stop screws for each spindle in all positions, enabling small sizing errors to be cancelled out.

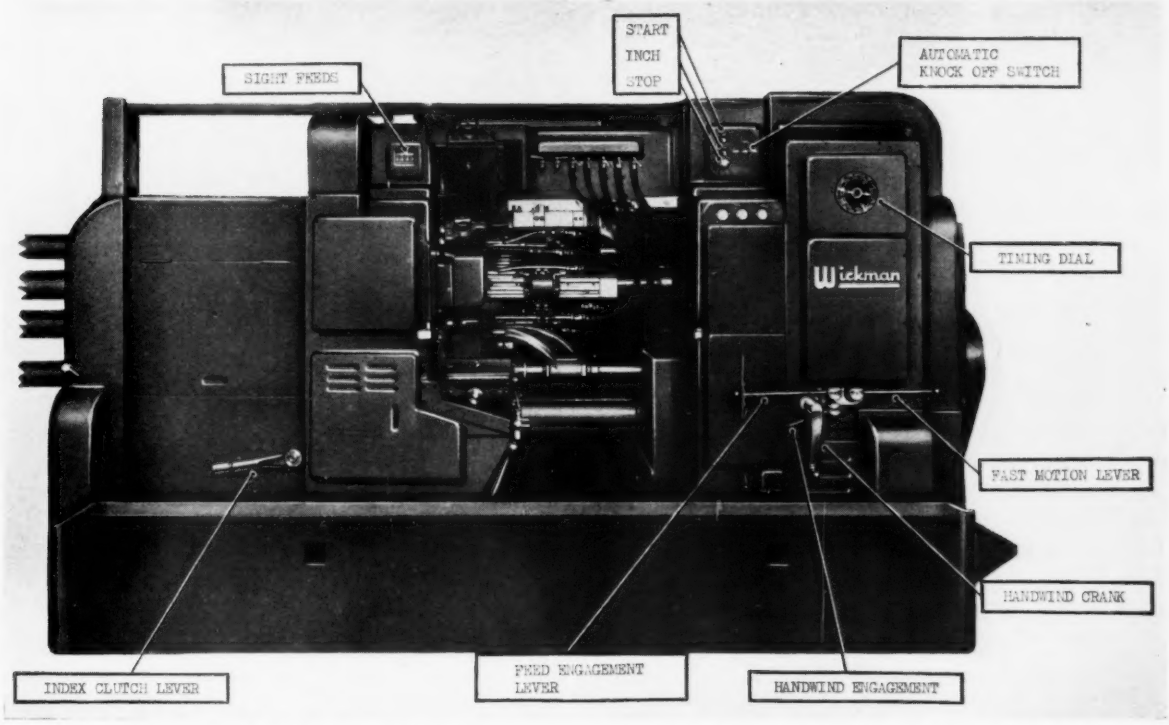
Bar Feed and Collet Operation

The bar feeding slide is controlled directly by the cam below it; an adjustment is available for different strokes. Two cams cover the full range of length, the bar being fed by a powerful adjustable spring. Collet operation is direct from the cam to a slide with alternative hand operation. The bar stop is arranged for operation dently the movements of the cross-slides or cross-slide attachments.

The upper camshaft, which is transversely mounted across the top of the drive housing, carries disc cams for the operation of the end-working slides and attachments, the dogs controlling the fast-slow clutch, and also a timing dial at the front indicating the timing of all machine movements.

Arrangements of Tool Slides

Two lower cross-slides and two upper cross-slides are provided on both four-spindle and six-spindle machines. On six-spindle machines an additional cross-slide is used for parting off at the front and a further auxiliary cross-slide in station 3 is available as an optional



Front view of controls of Wickman six-spindle automatic. The electrical control, hand winding crank, and feed levers are duplicated at rear of machine

are equally spaced to one another and to the centre bore and outside dia. within ±0·0002in., the hardened and ground collet seatings running true within 0·0005in.

The drum is indexed through gears by a modified maltese-cross mechanism. at each cycle the drum is indexed slightly past its correct position and then smoothly and positively drawn back by a powerful toggle clamp on to hardened and ground locators. This gentle movement obviates the possibility of wear in the locating mechanism and assures the maintenance of indexing accuracy throughout the life of the machine. A clutch is provided which disengages the drum indexing, bar feed, collet operation, and drum locking in one of two directions at will according to which is more suitable for the particular tooling equipment.

The main camshaft extends from the worm wheel in the drive housing, through the drum housing to the stock carriage end of the machine, and carries cross-slide feed and approach stroke cams, bar feed and collet operating cams, spindle drum locking cams, the arm of the modified maltese-cross mechanism, and the indexing clutch, and will accommodate cams for auxiliary attachments when required. A cam drum is fitted in the attachment drive housing to carry cams for special end-working attachments and a cam disc provided in the drum housing enables cams to be fitted for varying indepen-

extra. All cross-slides are provided with micrometer adjustment. All slides other than the part-off slide are fitted with master stops against the individual stop screws in the spindle drum stop ring for size control, and the two lower cross-slides have slideway wipers.

All cross-slides have a virtually constant approach stroke, with an infinitely adjustable feed stroke. The mechanism controlling these movements is exceptionally heavy and rigid, the advance stroke mechanism consisting of a toggle which remains locked during the feed stroke. The central main tool slide, hexagon on the six-spindle and square on the four-spindle, is exceptionally long providing ample capacity for mounting tools and attach-

ments, and is produced to the highest standards of accuracy. The main tool slide, which is fitted with bushes and a scraper ring, slides on the large dia. nitrided central stem, all torque being taken by the guide arm, the sliding surfaces of which are well protected from swarf.

Two auxiliary slides for mounting on the beam in stations 4 and 5 on the six-spindle machine, and in stations 3 and 4 on the four-spindle machine, are available as optional extras. The mechanism for operating the main tool slide, and the two auxiliary slides when fitted, is similar in principle to that on existing Wickman multi-spindle automatics, but of much more robust construction. This provides a constant approach stroke, together with an infinitely variable feed stroke with constant forward position of the slide, the mechanism which imparts the approach stroke being securely locked during the feed stroke. The timing of the end working slides in relation to the cross-slides can be adjusted within certain limits to suit the requirements of the tooling layout. A rigid box-section casting supports the stock carriage assembly which runs on rollers and is gear driven so that misalignment will not affect the accuracy of the machine.

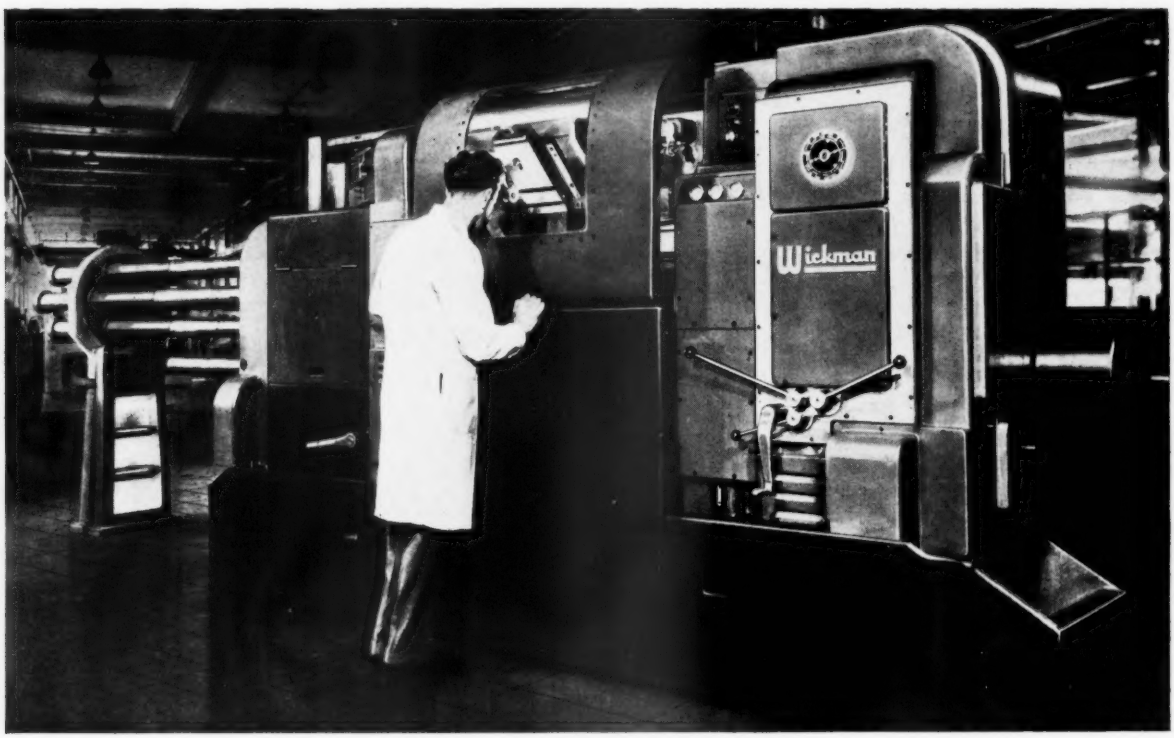
The machines are pressure lubricated by a pump which circulates oil from the sump to the gearbox and attachment drives and supplies oil from a tank to the spindle bearings and slides. Means are provided for flushing the system at will. Coolant is fed from a large gear pump to distributor headers at each side of the machine and to cocks adjacent to the lower cross slides.

Machine Controls

The controls include a stop-inch-start electrical control, hand-winding crank, hand-winding engagement lever, and a feed engagement lever, these being duplicated at the rear of the machine. Also included is a fast-motion lever which operates the fast-motion clutch and enables the setter to engage fast motion during any period of the machine cycle for setting up purposes. An indexing clutch lever disengages motion to bar feed, collet opening and closing, drum locking, and indexing mechanisms, and enables continuous setting-up to be performed at each station. Additional individual controls are also provided to bar feed mechanisms and collet opening and closing mechanism.

Ample swarf space is provided, and a standard swarf conveyor is available as an optional extra, a particularly valuable adjunct when machining work entailing heavy stock removal. A chute below the tooling directs swarf into the trough of a screw-type conveyor ejecting it into a receptacle or conveyor outside the machine. The screw conveyor is driven by an independent motor and reduction unit mounted on the outer end of the conveyor and the complete conveyor unit is easily removed for cleaning and servicing.

Attachments for operations such as threading and high-speed and deep-hole drilling are common to both machines.



Wickman multi-spindle automatic, available with four and six spindles, powered by a 40-h.p. motor, and incorporating infinite variation of tool-feed strokes without changing cams

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PATENTS AND REGISTERED DESIGNS FOR ISRAEL.—An agreement has been concluded between the British and Israel Governments whereby the time for making belated applications for United Kingdom patents or for registration of industrial designs with priority based on a corresponding application in Israel on or after May 15, 1947, may be extended until a date not later than January 31, 1951. A corresponding extension will be granted by the Government of Israel for making applications in that country founded on applications in the United Kingdom. Rules giving statutory effect to the above announcement are the Patents (Extension of Time) (Israel) Rules, 1950. S.I. 1950 No. 2024, and the Registered Designs (Extension of Time) (Israel) Rules, 1950. S.I. 1950 No. 2025.

SKEFKO BALL BEARING COMPANY.—To mark the company's fortieth anniversary the Skefko Ball Bearing Co. Ltd. has declared a special bonus of 3⅓ per cent. free of tax.

RAILWAY NEWS SECTION

PERSONAL

The Railway Executive has announced that Mr. H. H. Swift, Executive Officer (Electrical Engineering, New Works & Development), Railway Executive Headquarters, has been appointed Mechanical & Electrical Engineer, Southern Region.

Mr. R. S. F. Edwards has been appointed to be an Assistant Secretary of the Ministry of Transport, and Mr. C. F. Gingell has been appointed Principal Private Secretary to the Minister of Transport.

Mr. Harold Hobson has joined the board of the General Electric Co. Ltd.

Dr. Alexander Fleck, a Director of Imperial Chemical Industries Limited, has been appointed to be a Deputy Chairman.

Mr. A. R. Milne, formerly Continental Superintendent, Canadian National Railways, has been appointed European Commissioner of Colonisation, with headquarters in London.

Mr. J. H. Osborn and Mr. R. F. Horton have been appointed Directors of the Osborn Foundry & Engineering Co. Ltd., Sheffield.

The Scottish Region has announced that Mr. C. J. C. Taylor, Assistant to District Operating Superintendent, Glasgow, has been appointed Assistant to District Traffic Superintendent, Aberdeen.

Sir Thomas G. Spencer, Managing Director of Standard Telephones & Cables Limited, has been elected Chairman of the board of Directors, in succession to the late Sir Frank Gill. Sir Thomas Spencer will continue in the capacity of Managing Director in addition to holding the office of Chairman.

Mr. S. Ferguson, founder of Cooke & Ferguson Limited, has resigned as Chairman of the board of directors, but is continuing as a Director and will be available for consultation and special assignments; Mr. T. H. Windibank, Director of Crompton Parkinson Limited, has been appointed to be a Director and Chairman of the board.

The Minister of Transport has approved the appointment of Mr. A. E. H. Brown, who has been nominated by the British Transport Commission, to be a member of the Transport Users Consultative Committee for Wales, in place of Mr. E. V. Swallow, who has resigned. Mr. Swallow has resigned his office as a Member of the Transport Users Consultative Committee for Wales on his retirement from the service of the Docks & Inland Waterways Executive. Mr. A. E. H. Brown is Chief Docks Manager, South Wales Docks, Docks & Inland Waterways Executive.

Sir Eustace Missenden, O.B.E., M.Inst.T., who, as recorded in our December 29 issue, is retiring from the Chairmanship of the Railway Executive, was born in 1886 and entered the service of the South Eastern Railway in 1899, and, after several years' experience in station working, was transferred to the Office of the Superintendent of the Line in 1906. In 1912 he was appointed Assistant to the District Superintendent, Eastern Division, and in 1914 was transferred as Assistant to the London District Traffic Superintendent; and, after acting as London District Superintendent during 1919, he was appointed London District Traffic Superintendent in 1920. On the grouping in 1923 he became London (East) Divisional Operating Superintendent, Southern Railway, and he was appointed Assistant Superintendent of Operation in 1930. In 1933 he became Docks & Marine Manager. In 1936 he was appointed Traffic Manager, a position he continued to hold after he had assumed, at the outbreak of war, the responsibilities of General Manager, in the absence of Mr. Gilbert Szlumper on Government service. Sir Eustace Missenden was appointed substantive General Manager as from April, 1942. He received the honour of knighthood in the King's Birthday Honours, 1944. He was Chairman of the General Managers' Conference, Railway Clearing House, for 1947. With effect from July 1, 1949 he was appointed Officer Commanding, Engineer & Railway Staff Corps, Royal Engineers, T.A. Sir Eustace Missenden has held the position of Chairman, Railway Executive, since the formation of the Executive in 1947.

Sir Eustace Missenden
Chairman, Railway Executive, 1947-51

Mr. G. S. Rider, District Commercial Superintendent, Bristol, Western Region, British Railways, has retired.

Mr. E. A. Watson has been appointed Assistant to Vice-President, American Car & Foundry Company.

Mr. Frederick Seymour Whalley has relinquished the Chairmanship of The Vulcan Foundry Limited, but is continuing as a Director. Brigadier James Storar, Vice-Chairman, has been elected Chairman.

Rear-Admiral (E) W. G. Cowland has joined D. Napier & Son Ltd. (a subsidiary of The English Electric Co. Ltd.).

We regret to record the death on December 31, at the age of 65, of Lt.-Colonel Sir John Greenly, who, until July, 1950, was Chairman, Babcock & Wilcox Limited.

Dr. Charles Sykes has become Deputy Managing Director, Thos. Firth & John Brown Limited. Mr. Eric Mensforth has assumed the position of Managing Director, Firth Brown Tools Limited, and Mr. T. H. Burleigh has become Sales Director.

Mr. J. Singleton-Green, previously Technical Adviser with the Cement Marketing Co. Ltd., has been appointed Managing Director of Stressed Concrete Design Limited, the licensees for the Magnel-Blaton system of prestressing in this country.

Mr. A. C. Geddes and Mr. J. T. Rymer have joined the board of the National Gas & Oil Engine Co. Ltd., in succession to Mr. A. E. Carrodus, Managing Director, and Mr. E. M. Benjamin.

We regret to record the death, at the age of 87, of Mr. Robert Rowbottom, who retired as a Rates Assistant to the Goods Manager, Southern Area, L.N.E.R., in 1926. He started his railway career with the M.S. & L. R. in the Goods Manager's Office, Manchester, where he became head of the Rates & Charges Section, and on the extension to London he and his staff came to Marylebone in 1903. He subsequently became Chief Rates Clerk to the Chief Goods Manager, Great Central Railway, and following the grouping he was appointed one of the Rates Assistants to the Goods Manager, Southern Area, L.N.E.R., which position he held until his retirement in 1926. Mr. Rowbottom was one of the railway representatives responsible for the preparation of the Classification of Goods by Merchandise Train and the revised Schedules of Standard Rates & Charges which came into force in 1928; but he had retired from the railway service before these became operative.

Mr. R. W. Bailey

Appointed Executive Officer (Technical & Maintenance Staff), Railway Executive

Mr. G. W. Anson

Appointed Assistant to Operating Superintendent, Scottish Region, Glasgow

Mr. T. Wooding

Revenue Accountant, Newcastle-on-Tyne, North Eastern Region, who has retired

Mr. R. W. Bailey, T.D., M.Eng., A.M.I.C.E., A.M.I.I.A., Staff Officer (Technical & Maintenance Staff), Railway Executive, who, as recorded in our December 22 issue, has been appointed Executive Officer (Technical & Maintenance Staff), joined the Cheshire Lines Railway as a pupil in 1922. He was appointed Works Manager, Warrington, in 1932 and Assistant District Engineer, Manchester District, L.M.S.R., in 1937. From 1939 to 1945 he served in the Royal Signals as Chief Signal Officer, with the rank of Colonel, in various areas of the Middle East. On his return from war service he was appointed District Engineer, Perth District, L.M.S.R., and in 1946 became Staff Assistant to the Chief Engineer, L.M.S.R., at Watford. On nationalisation of the railways in 1948 he was appointed Technical, Workshop & Maintenance Staff Assistant to the Chief Officer (Staff & Establishment), Railway Executive Headquarters, and in 1949 became Staff Officer (Technical & Maintenance Staff).

Mr. G. W. Anson, M.B.E., A.M.Inst.T., Assistant District Operating Superintendent, Hull, North Eastern Region, British Railways, who has been appointed Assistant to Operating Superintendent, Scottish Region, Glasgow, joined the service of the North Eastern Railway at Hull in 1912, and after five years' war service was appointed to the Main Line Control Office, York. He subsequently held various appointments in the Sunderland and Newcastle Districts and returned to Hull West as Assistant Yardmaster in 1936. Three years later he became Traffic Agent & Stationmaster, Tyne Dock, Newcastle, and in 1941 went to West Hartlepool as Assistant Goods Agent & Yardmaster. He was appointed Goods Agent & Yardmaster, Gateshead, in 1942; Yardmaster, Hull, in 1943; Acting Assistant District Superintendent, Newcastle, in 1944; before becoming Stationmaster, York, in 1946. He was appointed Assistant District Operating Superintendent, Hull, in 1949.

Mr. T. Wooding, Revenue Accountant, Newcastle-on-Tyne, North Eastern Region, who has retired, joined the G.N.R. at Kings Cross. In 1907 he was transferred to the special Auditor's Section, and in 1924 he was promoted to the control of the District Auditor's Reports Section, where he was engaged on combining the G.N.R., G.E.R. and G.C.R. Auditors' Districts under the L.N.E.R. Southern Area. In 1933 he was placed in charge of the main section in the Merchandise Audit, and became Assistant Chief Clerk in 1935, passing to complete charge of Merchandise Audit in the South-

Mr. J. E. Cowderoy

Development Officer, London Transport Executive, who has retired

Mr. L. N. Mathur

Deputy Director, Indian Railway Branch, who has been touring British Railways

The Late Mr. J. B. Dunlop

Publicity Assistant to the Public Relations & Publicity Officer, Scottish Region, 1949-50

ern Area in 1937. In 1939 Mr. Wooding was promoted Chief Clerk of an All Line Merchandise Audit Office at Newcastle, comprising the Southern, N.E. and Scottish Areas of the L.N.E.R. In 1945 he was appointed Assistant to the Revenue Accountant, and in December, 1946, he became Revenue Accountant.

Mr. J. E. Cowderoy, M.B.E., Development Officer, London Transport Executive, who has retired, started his transport career in 1902 with the Kidderminster District Electric Lighting & Traction Co. Ltd., and joined the London General Omnibus Company in 1913 as a Schedules Assistant. Two years later he became Assistant to the Operating Manager, L.G.O.C. & Underground Railways, and in 1921 was appointed Traffic Investigation Officer. After the passing of the Road Traffic Act in 1930, Mr. Cowderoy, as Traffic Investigation Superintendent, conducted applications for road service licences for London buses and coaches. He was appointed Development Officer on the formation of the London Passenger Transport Board in 1933. Mr. Cowderoy has been associated with the Central London Staggering Campaign and with the local transport groups formed in 1941 under the auspices of the London & South Eastern Regional Board of Industry. For his work in connection with the staggering campaign he was made M.B.E. in 1944.

Mr. L. W. Mathur, B.Sc.(Eng.), B.Eng., A.M.I.E.E., Deputy Director (Telecommunication), Indian Railway Board, who has been touring British Railways for three months on a United Nations Fellowship, was born in 1903. After graduating in mechanical and electrical engineering at Benares University in 1927 and receiving preliminary training in India, he proceeded to Britain in 1928. Mr. Mathur was at Sheffield University and subsequently took a college apprenticeship course in the works of Metropolitan-Vickers Electrical Co. Ltd. at Manchester. On his return to India in 1932 he joined the South Indian Railway as Assistant Electrical Engineer and was appointed District Mechanical Engineer in 1943. During the war he was with the Indian Army Railway Workshop Group and was demobilised in 1945 with the rank of Captain. In 1946 he became Electric Traction Engineer in charge of the Madras suburban electric railway, and he was appointed Deputy Director (Telecommunication), Railway Board, in 1948. On completing his tour of British Railways, Mr. Mathur has proceeded on a visit to the French National Railways for a further month before returning to India; the subject of his United Nations fellowship has been "Electrification of Railways."

We regret to record the death of Mr. J. B. Dunlop, Publicity Assistant to the Public Relations & Publicity Officer, Scottish Region, British Railways, who commenced his railway career in the Goods Manager's Office of the Great Eastern Railway in 1907. He served in the 1914-18 war with the London Scottish, and on return to the G.E.R. took up duties in the Publicity Section. On the amalgamation in 1923 he was transferred to the headquarters office of the Advertising Manager, L.N.E.R., and later in the same year was appointed Assistant to the Scottish Area Advertising Representative. In 1936 he became Scottish Area Advertising Representative. On nationalisation Mr. Dunlop was appointed Advertising Officer, Scottish Region, and he became Publicity Assistant to the Public Relations & Publicity Officer in 1949.

The New Year Honours List

The following is a selection of honours of transport and industrial interest from the New Year list:—

Baron

Mr. Thomas MacPherson, Member of Parliament for Romford, 1945-50. For political and public services. He is a Member of the Port of London Authority and organised the Thames Water Bus service.

Knights Bachelor

Mr. Edward Dave Asher Herbert, O.B.E., M.I.Mech.E., M.I.E.E., Chairman, Short Bros. & Harland Limited, Belfast. He is also a Director in Cowans, Sheldon & Co. Ltd.

Colonel Victor Dunn Warren, M.B.E., T.D., A.M.I.Min.E., J.P., Lord Provost of Glasgow. He is Regional Manager, Scotland & Northern Ireland, Imperial Chemical Industries Limited.

Mr. Reginald Holmes Wilson, Comptroller, British Transport Commission.

C.B. (Civil Division)

Mr. Eric Barnard, C.B.E., D.S.O., Deputy Secretary, Department of Scientific & Industrial Research.

K.C.M.G.

Sir Alexander Hyslop Maxwell, Chairman, British Travel & Holidays Association.

K.B.E. (Civil Division)

Mr. Harold Frederick Downie, C.M.G., O.B.E., one of the Crown Agents for the Colonies.

Mr. Norman Arthur Guttery, C.B., Deputy Secretary, Ministry of Transport.

Mr. James Moir MacKenzie, C.M.G., O.B.E., W.S., Deputy Director General, Federation of British Industries. For services to Commonwealth economic relations.

C.B.E. (Civil Division)

Mr. Joseph Nalliah Arumugam, Permanent Secretary, Ministry of Transport & Works, Ceylon.

Mr. Karl Baumann, M.I.Mech.E. For services to turbine development.

Mr. Hayne Constant, M.I.Mech.E., F.R.Ae.S., F.R.S., Director, National Gas Turbine Establishment, Ministry of Supply.

Mr. Charles John MacDonald, O.B.E., Assistant Secretary, Ministry of Transport.

Mr. William Harold Salkield, M.Inst.T., General Manager & Harbour Authority, Gold Coast Railway.

Mr. Reginald John Samuel, M.I.C.E., Deputy Chief Engineer, Roads Department, Ministry of Transport.

Professor Arnold Nixon Shimmin, Member, National Arbitration Tribunal.

O.B.E. (Civil Division)

Mr. Andrew John Charnock, General Works Manager, Leyland Motors Limited.

Mr. Arthur Crossley, Managing Director, Henry Crossley (Packings) Limited, Bolton.

Mr. Reginald Thomas Ebrey, F.C.I.S., General Manager, Western Welsh Omnibus Co. Ltd.

Mr. Benjamin Gardner, General Secretary, Amalgamated Engineering Union.

Mr. Samuel Leonard Hopkinson, Manager, German Office, British Iron & Steel Corporation Ltd.

Mr. William Peter James, Principal, Ministry of Transport.

Mr. Ernest Arthur McGill, M.Sc., A.M.I.C.E., Deputy Chief Engineer, Civil Engineering Department, Crown Agents for the Colonies.

Mr. Thomas George Richards, A.M.I.C.E, Senior Engineer, Roads Department, Ministry of Transport.

Mr. Alexander Robertson, M.B.E., Deputy Licensing Authority (Scotland), Ministry of Transport.

Mr. William Young Sandeman, M.C., M.I.C.E., Civil Engineer, Railway Executive, Scottish Region.

Mr. William Wells, General Manager, Antofagasta (Chili) & Bolivia Railway.

M.B.E. (Civil Division)

Mr. Thomas William Bell, Higher Executive Officer, Ministry of Transport.

Mr. Bertram Ewart Blackledge, Superintendent, Coke Ovens & Fuel Departments, Steel Company of Wales Limited, Port Talbot.

Mr. John William Dunger, Assistant Commercial Superintendent, Train Services (Passenger), Railway Executive, Eastern Region.

Mr. Guy Warwick Ferguson, Staff Assistant to Chief Regional Officer, Railway Executive, North Eastern Region.

Mr. Wilfrid Thomas Geden, Stationmaster, Paddington, Railway Executive, Western Region.

Mr. Gerald Alfred Victor Hayes, A.C.I.S., Senior Secretarial Assistant, British Transport Commission.

Mr. Frank Herbert Jenkins, A.R.C.M., A.R.C.O., Senior Executive Officer, Ministry of Transport.

Mr. Harold Dawson Jennett, Departmental Manager, Brown Bayley's Steelworks Limited, Sheffield.

Mr. Frederick Willam Knight, Executive Officer, Crown Agents for the Colonies.

Mr. Frederick William Moore, A.M.I.Mech.E., Inspecting Engineer, Crown Agents for the Colonies.

Mr. Alexander MacDonald, Works Manager, North British Locomotive Co. Ltd.

Mr. Harold Owens, Chairman, South Wales Regional Committee, Transport & General Workers Union.

Mr. Harold Vincent Pollard, M.I.Mech.E., Senior Experimental Officer, Department of Scientific & Industrial Research.

Mr. Leonard Rushforth, M.I.E.E., Head of Section, Research Laboratory, British Thomson-Houston Limited, Rugby.

Mr. Percy Sheridan, Traffic Manager, City of Oxford Motor Services.

Mr. Algernon William Stevens, Senior Executive Officer, Ministry of Transport.

Miss Isabella Jessie Phillopson Stow, lately Sister, Rhodesia Railway Nursing Service, Northern Rhodesia.

Mr. David Taylor, Chief Instructor, Department of Operating Manager (Central Road Services), London Transport Executive.

Mr. John Maurice Walshe, A.M.I.E.E., Works Engineer, Belliss & Morcom Limited, Birmingham.

Mr. William Rueben Watson, Assistant to the Commercial Superintendent, Railway Executive, Eastern Region.

Mr. Frank Gilbert, Principal Staff Officer, British Transport Commission, is a member of the Training for Industry Team No. 1, which, under the auspices of the Anglo-American Council on Productivity, is visiting the United States to study American methods of education and training in industry. Mr. Gilbert is also representing the nationalised interests of coal, gas, electricity, and civil aviation, in addition to transport. The team sailed for the United States on December 28 and is due to return on February 16.

Resignation of Sir Eustace Missenden

Exchange of correspondence with Mr. Alfred Barnes and Lord Hurcomb

Sir Eustace Missenden, as was recorded in our last week's issue, has intimated to the British Transport Commission his desire to be released from the Chairmanship of the Railway Executive, a post which he has held since the formation of the Executive three years ago. Both the Minister of Transport and the Chairman of the B.T.C. have accepted his resignation with regret, recording at the same time their appreciation of the outstanding services he has rendered as Chairman. The correspondence between Sir Eustace Missenden, Lord Hurcomb, and Mr. Alfred Barnes, Minister of Transport, is given below.

Sir Eustace Missenden to Lord Hurcomb

December 6

MY DEAR HURCOMB,

It is now rather more than three years since I undertook, at your request, and with the approval of the Minister of Transport, the Chairmanship of the Railway Executive, a task which I know you have appreciated has required close and continuous application in endeavouring to resolve the many and varied problems which have surrounded the process of unifying the four main-line railways, with their different practices, and at the same time striving to restore their facilities during a period of restriction on capital expenditure.

With the wholehearted, experienced, and loyal assistance of all members of the Executive and an exceptionally able staff, the valuable help of the Chief Regional Officers and all grades in the Regions, together with the co-operation of the trade union officials, may I say we have been able to lay down a solid foundation on which those who come after may safely build.

It has been essential, in my view, in the early years to have a central organisation of sufficient strength and embracing high technical ability in order to lay down broad standards affecting such fundamental matters as permanent way, signalling, safety devices, types and number of locomotives, carriages and wagons, operating and commercial activities, stores, welfare, staff consultations, integration of transport, and a host of others, quite apart from the determination of the areas and responsibilities of the five Regions for England and Wales and one for Scotland.

As you know, much has been done in these directions, and I believe that the ground is being pretty well covered. It has always been the intention, an intention with which I am in complete accord, to review the organisation after about three years.

When taking into account the constant strain of the past three years, following eight years as General Manager of the Southern Railway covering the war years, I feel that this task is one that could best be carried out by a fresh mind, and I would, therefore, ask you to be good enough to release me at your convenience. In doing so, may I say how grateful I am to you, personally, and to your colleagues, for the consideration and the interest you have shown in all phases of the development of British Railways, and add that this has been of immense value to my fellow members and myself. Your officers have always been most co-operative.

It would not be fitting for me to close this letter without expressing to Mr. Barnes, Minister of Transport, my deep and sincere appreciation of his close personal interest in the work of the Railway Executive, which has so often been a source of encouragement.

Yours sincerely,

E. MISSENDEN

The Rt. Hon. Lord Hurcomb, G.C.B., K.C.B.,
Chairman,
British Transport Commission,
55, Broadway,
Westminster, S.W.1.

Lord Hurcomb to Sir Eustace Missenden

December 18

MY DEAR MISSENDEN,

It falls to me now to reply formally to your letter of December 6. My colleagues and I appreciate that, after the strain of the last eleven years, you feel entitled to ask for release from the Chairmanship of the Railway Executive, which you have filled with such distinction. We desire to convey to you our high appreciation of the great and exceptional services which you have rendered to transport in your various capacities, and, particularly, in the onerous and important post which you have held for the past three years, and which, as you recall, you undertook only on the understanding that you could claim release after the initial stages of organisation.

For myself, I look back on our long and friendly association in transport with pleasure, and join with my colleagues in sending you our thanks and all good wishes for the future.

Yours sincerely,

HURCOMB

Sir Eustace J. Missenden, O.B.E.

Sir Eustace Missenden to the Minister of Transport

December 6

MY DEAR MINISTER,

Further to our talk today, I now enclose, for your information, a copy of the letter which has been addressed to Lord Hurcomb, which indicates my desire to be released as convenient.

You will see that the letter sets out the main features of the work of the Railway Executive for rather more than three years, and expresses the view that the first stage of the organisation is now approaching completion.

I would like to emphasise what I have said in the last paragraph of my letter to Lord Hurcomb, and that is my deep and sincere appreciation of your close personal interest in the work of the Railway Executive, which has so often been a source of encouragement. This is not only my personal tribute, but it also expresses the feelings of my colleagues on the Executive. We have always found a readiness on your part to give every consideration to the various matters that come under review from time to time, and, may I add, we have been most grateful for the unfailing co-operation of your Officers at the Ministry.

Yours sincerely,

E. MISSENDEN

The Rt. Hon. Alfred Barnes, M.P.,
Minister of Transport,
Berkeley Square House,
Berkeley Square, W.1.

Mr. Barnes to Sir Eustace Missenden

December 20

DEAR SIR EUSTACE,

You had been good enough to warn me that I should receive your letter of December 6 advising me that you had tendered your resignation as Chairman of the Railway Executive. It does not surprise me that, after so long and strenuous a career in the railway world, you should now wish to seek some respite from your heavy burden.

Three years ago you undertook, at my request, the immense task of welding the four great railways into one and forming them into a single instrument designed to play an effective part in the integrated system of transport which it is the duty of the British Transport Commission to create. To this task you brought the experience of nearly half a century of railway service, and for the great energy and ability which you have devoted to it you have my warm gratitude and the gratitude, too, of H.M. Government as a whole.

I much appreciate your kind references to my own interest in the work of the Railway Executive. The cordiality of my relations with you and with the Executive has always been a source of gratification to me, and I am indeed sorry that the time has come when you feel that you must relinquish your post.

I wish you a long and happy retirement, and again thank you for the great services which you have rendered to the railways, and, through them, to the country. My good wishes are shared by all the officers in my Department whose duties have brought them into contact with the Railway Executive.

Yours sincerely,

ALFRED BARNES

Sir Eustace Missenden, O.B.E.

BRITISH RUSTING STANDARDS ACCEPTED IN U.S.A.—In December, 1949, the British Iron & Steel Research Association issued through its Corrosion Laboratory a series of photographs depicting grades of breakdown by rusting of painted steel surfaces. Reprints were made available in the hope that comparisons in this important field would become more uniform. It is now announced that the standards have been accepted for use by the American Waterworks Association in exposure tests. This should greatly facilitate comparison of results of tests carried out here and in the U.S.A.

COMPLETION OF BRITISH RAILWAYS FIRST STANDARD LOCOMOTIVE.—The Minister of Transport, Mr. Alfred Barnes, has accepted the invitation of the Railway Executive to christen British Railways' first standard locomotive, *Britannia*, at Marylebone Station, on January 30. *Britannia* has been chosen as being a link with the Festival of Britain, and as a traditional British engine name. The new locomotive, British Railways No. 70000, is one of 25 similar locomotives, suitable for either express passenger or fast freight trains, now under construction at Crewe. Before the naming ceremony, the new locomotive, which was recently completed, will be undergoing running-in and preliminary tests in the Crewe area and on the main line between Crewe and Carlisle.

British Transport Commission Statistics (Period No. 11)

Summary of the principal statistics for the four-week period ending November 5

STAFF

—	B.T.C. Head Office	British Railways	London Transport	British Road Services (Road Haulage)	Road Passenger (Provincial & Scottish)	Hotels & Catering	Ships & Marine	Inland Waterways	Docks, Harbours, Wharves	Railway Clearing House	Commercial Advertisement	Legal	Films	Total
Number ...	239	610,560	98,278	75,255	59,578	17,981	6,161	5,000	19,168	640	203	273	28	893,364
Inc. or dec.	—	—4,431	—220	+207	—794	—425	—66	—53	—169	—4	+2	—5	—1	—5,959

BRITISH TRANSPORT COMMISSION TRAFFIC RECEIPTS

—	Four weeks (Period No. 11)		Aggregate for 44 weeks	
	To Nov. 5, 1950	To Nov. 5, 1949	1950	1949
	£000	£000	£000	£000
British Railways—				
Passengers	6,864	7,188	92,575	99,291
Parcels, etc., by passenger train	2,561	2,241	26,003	24,540
Merchandise	7,349	6,209	71,991	67,561
Minerals	2,823	2,396	27,181	24,894
Coal & coke	6,742	5,400	64,921	57,127
Livestock	302	213	469	1,153
	26,641	23,647	284,140	274,566
British Railways— C. & D. & other road services ...	759	702	8,063	7,495
Ships and vessels	648	637	9,585	9,425
London Transport—				
Railways	1,245	1,118	12,206	12,150
Buses & coaches	2,440	2,359	26,177	26,690
Trams & trolleybuses	827	836	8,956	9,275
	4,512	4,313	47,339	48,115
British Road Services— Freight charges, etc.	5,504	4,137	52,212	28,800
Road Passenger Transport	2,761	2,468	32,839	30,489
Docks, Harbours & Wharves ...	968	889	10,113	9,414
Inland Waterways	135	114	1,379	1,292
Hotels & Catering	1,123	1,011	12,351	11,306

LONDON TRANSPORT

—	Passenger journeys	Inc. or dec. per cent. over 1949	Car miles	Inc. or dec. per cent. over 1549
	000		000	
Railways	47,791	— 1·2	17,784	— 1·2
Buses & coaches	211,460	+ 0·2	24,601	+ 3·1
Trams & trolleybuses	81,742	— 10·3	8,186	— 4·8
Total	342,993	— 2·7	50,571	+ 0·2

INLAND WATERWAYS

Tonnage of traffic and ton miles

—	Tonnage	Inc. or dec. per cent. over 1949	Ton miles	Inc. or dec. per cent. over 1949
	000		000	
Coal, coke, patent fuel & peat	436	0·1	6,185	—11·8
Liquids in bulk	158	+19·9	4,190	+26·2
General merchandise	352	— 9·4	5,514	+10·6
Total	946	+ 6·3	15,889	+ 3·7

BRITISH RAILWAYS

Rolling Stock Position

—	Operating stock	Number under repair	Available operating stock	Serviceable stock in 1949
Locomotives	19,022	3,382	15,640	15,713
Coaching vehicles	57,818	5,202	52,616	50,521
Freight wagons...	1,101,196	88,040	1,013,156	1,008,470

BRITISH RAILWAYS

Passenger Journeys (Month of September, 1950)

Full fares	Monthly returns	Excursions, cheap day, etc.	Other descriptions	Workmen	Season tickets	Total	Inc. or dec. per cent. over 1949
4,889,000	15,933,000	18,536,000	3,986,000	18,141,000	36,935,000	98,420,000	—3·0

BRITISH RAILWAYS

Freight Tonnage Originating and Estimated Ton-Miles (Period No. 11)

—	Minerals	Merchandise	Coal & coke	Livestock	Total	Inc. or dec. per cent. over 1949
	000	000	000	000	000	
Tons originating ...	4,985	4,353	13,523	135	22,996	+2·4
Ton-miles	416,046	569,314*	834,581	—	1,819,941	+4·2

* Includes livestock

BRITISH RAILWAYS (Period No. 11)

—	Total steam coaching train-miles	Total electric coaching train-miles	Total freight train-miles	Freight train-miles per train engine-hour	Net ton-miles per total engine-hour	Locomotive coal consumption	
						Total tons	Lb. per engine-mile
	14,341,000	3,743,000	11,410,000	8·2	590	1,060,000	62·1
Inc. or dec. per cent. over 1949	—0·3	+3·2	+2·7	—	+4	—0·3	—0·1

French Marshalling Yard Practice

Meeting of the British section of the Société des Ingénieurs Civils de France

A meeting of the British Section of the Société des Ingénieurs Civils de France was held at the Institute of Transport on October 25, when a paper was read by Monsieur J. G. Walter, Chief Signal & Telecommunications Engineer, French National Railways, on the layout and equipment of modern marshalling yards in service on those lines.

The President of the Section, Mr. R. D. Gwyther, was in the chair, and in welcoming the lecturer referred to the work he had done in connection with the application of automatic and power signalling, and his association with modern developments in effecting the re-habilitation of the railway system since the war.

Monsieur Walter said that it was not his intention to put the French installations forward as models of perfection, but they had been working—some of them for many years—satisfactorily. There were different ways of solving the same problems and engineers had had to find the best means of getting maximum efficiency at minimum cost under prevailing conditions. Design and operation of marshalling yards was a most important factor in operating a railway system efficiently and economically.

Mechanical Equipment

The paper, which was illustrated by lantern slides dealt with the general problems and forms of layout concerned in yard work, the rail-brakes and other equipment provided to mechanise it, and the ingenious "ball machine" invented by M. Robert Lévi, of the S.N.C.F., which controls the automatic setting of the points on the down side of the hump and provides the necessary storage of controls, to enable the descending vehicles to set the points in advance of themselves and so direct them to the correct siding. This apparatus has not yet been used outside France.

Some particulars of French yards and their dates of completion were included in the paper, after which the author exhibited a talking film showing details of the operation of a large yard, the principles of the working of the ball machine being made clear by diagrams.

The President, moving a vote of thanks to the author, said he found it difficult to understand why automatic couplings had not been developed, since the hand uncoupling appeared to be the one primitive element in these modern yards.

Mr. J. S. Wills, President of the Institute of Transport, seconded the vote of thanks.

Discussion

Mr. M. G. J. McHaffie, opening the discussion, paid a compliment to Monsieur Walter for the way in which he had presented in English such a complex and difficult subject.

It might be of interest to show a plan of the layout of Southampton Docks, where they had marshalling to carry out, but could not, because of local conditions, have the hump system. They had not room for it and also their traffic was a two-way movement in the yard. Rapidity in loading and unloading wagons and in turning ships round was the main object to be achieved. The old dock layout was not very convenient, but in setting out the later area, more attention had been given to getting a rational system of rail facilities, capable of extension. It was necessary to have sidings arranged specially to facilitate rapid handling of the wagons—empty or full.

Mr. C. E. R. Sherrington said it was remarkable that so ingenious an apparatus as the ball machine had not been used in this country. He was interested in the use of two tracks on the hump—in some places considered a necessity—and also to know if the photo-electric beam apparatus controlling the "king" points, was satisfactory in foggy weather.

Mr. S. E. Parkhouse said that in this country we were afflicted with grease lubrication of wagons, which ran more slowly than those fitted with oil, but he hoped that these problems would be solved during the next few years. On the question of using wireless communication and loud speakers, he preferred visual signals.

Mr. L. H. K. Neil remarked that the commercial service of the railways was much concerned with paying claims for damage and he would be interested to know whether these modern marshalling yards and equipment reduced the chances of impact between wagons and enabled the engineers to disavow responsibility for damage to consignments and the consequent liability of the railway.

Mr. J. C. Kubale discussed the question of the height of the hump and the position of the brake control cabin. In this country, wide variations in the conditions would make a high hump necessary for getting every vehicle to run if required to the end of the sidings, as seemed to be attempted in France.

Monsieur J. G. Walter was afterwards entertained to dinner by the Société at the French Club where his health was proposed by Mr. J. S. Wills. Replying to the toast he said it was important that French and British engineers should maintain contact and exchange frequently their ideas and experience.

British Railways 1951 Rolling Stock Programme

First of the new standard-type locomotives, carriages, and wagons

The British Railways stock-building programme for 1951 comprises 400 locomotives, 2,440 carriages, and 39,975 goods vehicles, and includes the first of the new standard locomotives and carriages and standard types of wagons. In the case of carriages and wagons, shortage of materials and of workshop capacity restricted the output for 1950, but this year should bring some easement and thereby help to overcome the acute shortage of modern railway carriages and certain types of freight wagons.

Of the 400 locomotives included in the 1951 programme, 159 will be of the new standard types, allocated to Regions as described in our October 6 & 13, 1950, issue. Those of existing Regional types to be constructed include: 50 L.M.R. 2-6-0 Class "4" M.T.; 63 L.M.R. 2-6-0 Class "2" M.T.; 40 L.M.R. 2-6-2T Class "2" M.T.; 20 W.R. 0-6-0T "Uncoloured"; eight E.R. 0-6-0T "J 72"; and five L.M.R. 0-4-0T Dock. In addition, the programme includes 51 0-6-0 350-h.p. diesel electric shunting (15 for the L.M.R. and 36 for the E. & N.E. Regions) and four 0-6-0 200-h.p. diesel mechanical shunting locomotives for the E. & N.E. Regions.

The 2,440 coaching vehicles include 1,189 of the new standard types, of which some details were given in our issue of December 1, 1950, and 21 sleeping cars, 587 non-corridor vehicles, 455 vans, and also 124 motor third class brake and 64 trailer third class for electric services.

New Wagon Construction

Features of the wagon-building programme are the provision of 2,005 steel-carrying wagons, to provide for increase in steel production, and 1,500 27-ton iron ore wagons designed for discharge by tippler.

All possible components, including underframes and running gear, will be standardised, and a high percentage of wagons fitted with vacuum brakes to permit increase in express freight services. Brake vans will be of new standard design agreed with the railway trade unions, with improved amenities such as small projecting windows giving a view ahead and to the rear.

The numbers of the different types of wagons to be built are:—

13,750	Open (all 13-ton except 30 12-ton carriage trucks)
3,600	Covered (8-ton banana, 12-ton ventilated and 20-ton grain)
17,661	16-ton and 27-ton mineral, not hoppered.
750	13-ton and 20-ton mineral, hoppered.
68	Special types (21 and 25 tons)
700	Cattle
2,005	12- to 42-ton steel carrying
400	20-ton brake vans
1,041	Service wagons (14 to 50 tons)

Questions in Parliament

Carriers' Licences

Lord Malcolm Douglas-Hamilton (Inverness—C.) on December 11 asked the Minister of Transport how many objections were made by the Road Haulage Executive and the B.T.C. to applications by individual hauliers over the last year.

Mr. Alfred Barnes: During the year ended September 30 some 16,800 objections were made, 5,000 by the Railway Executive and 11,800 by road hauliers including the Road Haulage Executive. Complete information as to objections by the Road Haulage Executive is not available; out of nearly 11,200 objections, 3,300 were made by the Road Haulage Executive and 7,800 by other hauliers.

Mr. David Renton (Huntingdon—Nat. Lib.): Is it not a fact that even when an independent judicial tribunal established by Parliament has heard the objections and decided to grant the licences, the B.T.C. or its Executives is refusing permits to operate? Will the Minister take steps to bring this to an end?

Mr. Barnes: Mr. Renton is entirely wrong.

Mr. Peter Thorneycroft (Monmouth—C.): Does the Minister really mean that he gives an undertaking to the House this afternoon that in any case where the Traffic Commissioners grant the licence a permit will also be granted?

Mr. Barnes: Certainly not. This has nothing to do with the question.

Staff & Labour Matters

Railway Wage Claims

The court of inquiry, of which Mr. C. W. Guillebaud is chairman, appointed by the Minister of Labour to consider the three railway unions' claims and the deadlock arising out of the Railway Executive offer, held a preliminary meeting on December 29, and began its regular sittings on January 4.

Contracts & Tenders

An order has been placed by the New Zealand Government with the North British Locomotive Co. Ltd. for 16 "Ja" class 4-8-2 locomotives to a total value of £372,000. The first five locomotives are to be shipped by the end of this year and the remaining eleven by August, 1952.

A contract valued at £2,400,000 for the development of the Port of Chittagong has been obtained by Braithwaite & Co. Engineers Ltd. The consulting engineers are Messrs. Rendel, Palmer & Tritton; Merz & McLellan; and Valtenbyggnadsbyran of Stockholm, Sweden; and the project is for a series of screw-pile jetties comprising seven berths for ships of up to 10,000 tons each.

Notes and News

British Airways Corporations Traffics.—In July, 1950, British Airways Corporations and associates carried 160,000 passengers on scheduled services—23 per cent. more than in the corresponding period of 1949.

Institution of Locomotive Engineers.—At a meeting of the Institution of Locomotive Engineers to be held at the Institution of Mechanical Engineers, Storey's Gate, St. James's Park, S.W.1, at 5.30 p.m. on January 17, Mr. S. G. Smith will read a paper on "Standardisation of Coaching Stock."

Chief Supplies Officer Required.—The London Transport Executive invite applications for the post of Chief Supplies Officer. Candidates, not over 45 years of age, must have had a wide practical experience of purchasing and storekeeping, and be accustomed to carrying responsibility. See Official Notices on page 27.

Canadian Railway Rates: Application for Increase.—The Canadian railways applied on December 21 to the Canadian Board of Transport Commissioners for an immediate general increase of 5 per cent. on freight rates and a deferred increase of an unspecified amount. A 5 per cent. increase is estimated to yield $17,500,000 yearly, but the recent wages settlement will add $30,800,000 to the railway wage bill immediately. The railways have asked for an immediate 10 cents a ton increase in coal and coke rates. The unspecified deferred increase is calculated to offset the cost of the 40-hr. week, effective from June 1, 1951.

End of Freight Rebates.—The Minister of Transport has made the Railway Freight Rebates Regulations, 1950, the effect of which is to terminate as from the end of the year, as regards the B.T.C., the system of rebates provided for by the Railway Freight Rebates Enactments, 1929-43. The regulations provide also for winding up of the Railway Freights Rebates Fund and for payment of the balance to the Commission. From January 1, 1951, to the date when a charges scheme governing railway merchandise charges comes into force, payment of rebates on milk and livestock traffic will be continued on a voluntary basis at the present rate of 12½ per cent.

B.O.A.C. Deficit Rate Reduced.—During the year ended October 31, 1950, British Overseas Airways Corporation reduced its annual deficit rate, compared with the year to October 31, 1949, from £8,400,000 to £5,700,000.

Leopoldina Railway Derailment.—A passenger train on the Leopoldina Railway was overturned as the result of derailment near Victoria, Espiritosanto State, Brazil, on December 23, resulting in 17 persons being killed and some 100 injured.

Renold & Coventry Chain Company.—The interim ordinary dividend for the year ending April 1 next of the Renold & Coventry Chain Co. Ltd. is again 3 per cent. The final dividend for 1949-50 is 12 per cent., making 15 per cent. for the twelve months.

Night Working in Malaya.—The suspension from January 3 is announced by the Malayan Railway of night trains in both directions between Singapore and Kuala Lumpur, including the night mails, because of the decrease in passengers travelling by night. No mention is made of any change in the night services between Kuala Lumpur and Prai (for Penang).

L.M.R. Station Christmas Trees.—Seventeen principal stations in the London Midland Region of British Railways were decorated with Christmas trees this year. There was an 8-ft. model of Santa at Euston Station, and other stations on the Region decorated included St. Pancras, Liverpool, Manchester, Blackpool, Preston, Stoke, Carlisle, Leicester, and Nottingham.

Further South London Tramway Abandonment.—A further nine tram routes in South London are being replaced by bus services on the night of January 6-7. They are Nos. 1, 2-4, 6-10, 8-20, and 22-24. The effect will be that tram services in Wimbledon, Merton, Tooting, and Balham will cease, and those in Lambeth, Southwark, Wandsworth, and Westminster, will be further reduced. Some of the replacement bus services will follow, and others will be in extension of, the withdrawn tram routes.

U.S.A. Coal Shipments.—The first cargo of coal from U.S.A. to arrive during the present supply crisis recently was discharged in Cardiff, consisting of 4,500 tons of locomotive coal for British Railways. This was the first import into South Wales since the fuel crisis of 1947. At the same time, several ships were loading coal for export.

Road Accident Statistics.—The Ministry of Transport provisional figures of road casualties for November, 1950, total 17,843, against 14,783 for November, 1949, and 20,328 in 1938. The final returns for October, 1950, show that total casualties were 17,699, including 483 killed and 4,346 seriously injured; this is the highest total for any October since the war and is 2,067 more than last year.

Unusual Bus Licensing Decision.—By a recent ruling in Edinburgh by the licensing authority for public service vehicles, on a direct bus service between Dunbar and East Fortune, the request of the applicants to be allowed to run a direct bus service on Wednesdays, Saturdays, and Sundays, and for their application to be granted or rejected entirely, was refused, and they found themselves the possessors of a Wednesday bus service which they did not want. On Saturdays a convenient train is available, and on Sundays a bus service is operated by another company. It was explained at the hearing that the sanatorium at East Fortune was the main reason for travellers visiting the district. Until now, travellers to the sanatorium on Wednesdays have had to make a detour of 17 miles.

Omnibus Society.—Colonel Sir Joseph Nall will deliver his Presidential Address to the Omnibus Society at the annual meeting of the Society, which will take place at

Christmas Tree decorations at Euston (see paragraph above)

the Institute of Transport, 80, Portland Place, London, W.1, at 6.30 p.m. on January 22. The address will be entitled "A Passenger Thinks Aloud."

Lamp Manufacturing & Railway Supplies Limited New Address.—Lamp Manufacturing & Railway Supplies Limited has changed its address to 11-12, Finsbury Square, London, E.C.2. The telephone number, Monarch 2376-7, is unchanged.

New Seat Reservation Facilities.—It is now possible to reserve seats in the principal trains of British Railways for journeys on any day throughout the year. A uniform system of numbering seats is to be introduced on February 1. In each compartment opposite seats will have the same number and be distinguished by the words "facing engine" or "back to engine" on the reservation ticket handed to passengers when booking seats.

Peruvian Corporation Limited.—In his statement circulated with the report and accounts of the Peruvian Corporation Limited, whose results were given in our December 22 issue, the Chairman, Mr. W. H. White, attributes the sterling decreases in receipts and expenditure to the fall in the value of the sol in relation to sterling during the year. Receipts and expenditure in local currency showed an increase of about 40 per cent. Total freight tonnage carried was some 18,300 tons less than the previous year, whilst the number of passengers decreased by some 100,000. Whilst political stability and labour conditions on the whole improved in Peru they showed no improvement in Bolivia. New locomotives had arrived and new passenger stock was on order for the Central and the Southern Railways. The earthquake and short-lived uprising in Peru had interrupted working on the Southern Railway. In September, 1949, the Peruvian Government sanctioned rate increases of 67 per cent. (with some exceptions) on the Central, and of 40 per cent. on other railways.

U.S. Railways Increase Revenue.—The Association of American Railroads estimates operating revenues of U.S. Class I railways in November at almost $678,000,000, compared with the November, 1949, total of $574,000,000. These revenues do not take operating expenses or other costs into account. The eastern district is expected to report the biggest revenue increase for last month.

B.T.C. Resignations from Public Transport Association.—The Public Transport Association has received letters from the London Transport Executive and the Tilling Group of bus companies, controlled by the British Transport Commission, intimating their resignation from the Association as from December 31, 1950. The undertakings concerned have been members of the Public Transport Association and its former constituents for many years, and no reasons for their resignations have so far been made known. It is understood, however, that the decision was based on the view that embarrassment might arise if the Association decided to approach the Government on some question on which the British Transport Commission was bound to deal direct with the Ministry of Transport.

J. Brockhouse & Company.—A final dividend of 12½ per cent., making 20 per cent. for the year, is to be paid on the ordinary stock of J. Brockhouse & Co. Ltd. Presiding at the recent annual meeting the Chairman & Managing Director, Mr. J. L. Brockhouse, referred to impending nationalisation of the subsidiary District Iron & Steel Co. Ltd. as legalised confiscation. He also alluded to the scarcity of raw materials in conjunction with rearmament, and suggested that rearmament contracts and orders for dollar exports or essential exports should be given distinctive symbols so that all engaged on them would know that they should be given priority. This might at least postpone a detailed rationing scheme.

Brush Export Limited London Office.—Brush Export Limited, which was recently formed to handle all export business of the Brush Electrical Engineering Co. Ltd., and has its head office at Loughborough, has opened a London office. The office is situated in Duke's Court, Duke Street, St. James's, S.W.1, headquarters of the Brush/ABOE Group of Companies, and its first Manager is Mr. C. W. Glanister, who was, until recently, Chief Engineer & Manager to the Ceylon Government Department of Electrical Undertakings.

New Zealand Railway Strike.—As the result of a wage dispute, and in accordance with a decision of the national council of railwaymen's unions, New Zealand Government Railways employees came out on strike at midnight on December 23-24; action had been deferred till the Saturday night, to facilitate Christmas holiday travel, though some Auckland men had struck 48 hr. earlier. The Government adhered to its decision not to negotiate with the strikers and reaffirmed its statement that the men must restate their case before the railways' industrial tribunal. The Federation of Labour, which considers the strike seriously damaging to the trade union movement, is trying to find a basis for settlement, pending which the strikers returned to work on December 30.

East Midland Motor Services Limited.—Presiding at the recent annual general meeting of East Midland Motor Services Limited, Mr. J. W. Womar, Chairman of the company, said that during the year operating costs had continued to rise, due largely to the Government's 1950 budget decision to double the tax on petrol and fuel oil. They were proud of the fact that their fares had remained unchanged except in a few instances since the company was formed. But the time had now come when, to secure revenue to meet increased costs, it might well be necessary to raise fares. As to "area" road passenger transport schemes, so far there had been no whisper of any move by the Road Passenger Executive to prepare a scheme in the company's area.

Birmingham Small Arms Company.—Presiding at the recent annual general meeting of the Birmingham Small Arms Co. Ltd., the Chairman, Sir Bernard D. F. Docker, said that the sales value of the steel group in the year covered by the report again exceeded the previous record by a small margin. Exports were maintained and in the dollar area increased. It seemed likely that the corporation formed in accordance with the Iron and Steel Act might exercise the option to acquire the steel interests of the group. He looked with alarm on the passing of that fine business into the hands of a national board. The report was adopted and the ordinary dividend of 10 per cent. approved.

Ransome & Marles Bearing Co. Ltd.—Speaking at the annual general meeting of Ransome & Marles Bearing Co. Ltd., Mr. F. W. Baker, Chairman, said that sales in the year ended June 30 last created a new high record and were well distributed over various industries at home and overseas. All their works had been employed to capacity and the capital expenditure of the

Terminal Motorcar Service for Tourists

Fleet of motorcars operated by Godfrey Davis Limited for hire by American visitors, at Waterloo Station. (*See paragraph in our December* 15, 1950, *issue*)

OFFICIAL NOTICES

past years had been more than justified by its effect on the volume of output and efficiency. A gross trading profit of £718,295 showed a slight reduction in spite of the increased turnover due to many increases in costs which the company had absorbed as a deliberate policy. The accounts showed £257,717 spent on new capital items and £285,000 allowed for taxation. Wages and salaries cost £1,000,000 more than in 1939, but the net dividend to shareholders was £110,000, compared with £101,500, when the capital was £100,000 less.

Murex Limited.—The interim ordinary dividend of Murex Limited for the year ending April 30, 1951, is to be 5 per cent. Last year it was 4 per cent., followed by a final payment of 6 per cent. The directors point out that in recent years the company has applied a policy of dividend limitation; the rate of dividend on the ordinary stock has remained unchanged since 1937. The financial results for the six months ended October 31, 1950, show a moderate improvement over those for the corresponding period of 1949. There has been a steadily increasing demand for the company's products but a shortage of certain raw materials has already arisen.

Road Haulage Insurance Plan.—The plan to meet the insurance needs of the Road Haulage Executive, which took effect on January 1, embraces all sections of the British insurance market, including tariff and independent companies, mutual offices, and Lloyd's underwriters. The scheme, which covers more than 36,000 commercial vehicles and private cars, the liabilities of the carriers for the goods transported, and associated risks of the large undertaking, is operated through a system of service points made practicable by the system of branch offices of insurance companies throughout the country. The points have been chosen to conform to the district organisation of the Road Haulage Executive, and all claims will be dealt with there.

Scottish Motor Traction Co. Ltd.—Presiding at the recent annual general meeting of the Scottish Motor Traction Co. Ltd. the Chairman, Sir Andrew H. A. Murray, pointed out that they were considering the first year's working of the company divorced from its early coaching and bus activities. The trading profit had increased by 20 per cent. over the previous year. The profit figure brought forward from the previous year was £231,173. The figure for the year under review, after meeting exceptional and non-recurring charges, was £99,357. The preference dividend reserve no longer required was £3,232, making a total of £333,762. Against this figure there was to be charged, first, preference dividend to date of repayment, £31,096; second, the special ordinary dividend of £92,213; and, third, the proposed ordinary dividend of £34,581, making, in all, a total £157,892 and leaving to be carried forward £175,870.

Level Crossing Accident in Czechoslovakia.—Forty-one persons were killed and 46 injured when a passenger train ran into a bus at a level crossing near Podivin, Moravia, on December 21. The crossing keeper was arrested.

Applications for Higher Bus Fares.—The Aldershot & District Traction Co. Ltd. announced recently that continually rising costs render the revision of fares inevitable and applications to do so are being made accordingly. The higher prices of tyres and lubricants are estimated to represent an increase of 2 per cent. in the running costs of road transport vehicles. The Road Haulage Association does not propose at present to go beyond a recent statement that an increase of 5 per cent. in charges is justified because of higher costs.

Sheffield Twist Drill & Steel Company.—A £30,000 three-storey extension to the works of the Sheffield Twist Drill & Steel Co. Ltd. was opened recently by Mrs. Laure Dormer, widow of the late Mr. H. A. Dormer, the first chairman of the company. The extension, which incorporates more production bays, will result in increased production of Dormer high-speed steel twist drills and engineers' small tools, and will help to satisfy the growing demand for export products. Begun in April, 1949, the new extension has been designed to give the maximum amount of natural lighting and brings the total productive floor area of the works to more than four acres.

Irish Railway Strike Spreads.—The strike of members of the Irish Transport & General Workers Union employed by Coras Iompair Eireann, has spread to the docks at Dublin and Cork, where dockers decided not to handle cross-Channel goods normally carried over the C.I.E. railways, and to road freight workers in Limerick. This is preventing traders from sending cattle by rail to Dublin for export and will result in shortages of fuel oils and petrol in some districts. So far, no negotiations over the strike have begun. C.I.E. gives the number of men who had not reported for duty as 1,895. The revised emergency passenger timetable introduced on December 23 is still operating; it enabled Christmas traffic to be handled with the minimum of inconvenience.

Schoolboy's Own Exhibition. — The Schoolboy's Own Exhibition held at the New Horticultural Hall, Westminster, from January 1-13, includes many scientific and mechanical working models. The British Railways exhibit comprises an electrically operated O-gauge model railway with various types of modern rolling stock, including one of the new British Railways standard locomotives.

Winter Visitors to Britain.—The British Travel & Holidays Association states that unsettled world conditions have so far had little effect on the winter tourist trade in Britain. The total of foreign visitors in November was some 21,000, and though slightly less than for November, 1949, was nearly 11 per cent. more than the pre-war average. It is estimated that, in addition, 6,000 visitors arrived from the Commonwealth. Of the total, visitors from U.S.A. numbered 4,385, which is some 8 per cent. more than in 1949. The proportion of November visitors arriving by air was 34 per cent.

Collision Near Manchester (Central).—The 7.35 a.m. train from Manchester (Central) to Liverpool (Central), London Midland Region, came into collision with a light engine at Throstle Nest East Junction, near Manchester (Central), on December 27, 1950. Of the injured 29 persons were taken to hospital (including five railway staff) and eleven were treated at Manchester (Central) Station; 24 persons were detained in hospital. The Ministry of Transport enquiry is being opened at the Midland Hotel, Manchester, at 10.30 a.m., today, January 5, by Colonel D. McMullen, Inspecting Officer of Railways.

Newburgh and St. Fort Branch: Withdrawal of Passenger Service Disputed.—On an application by certain local authorities and residents, an interim interdict was granted in June, 1950, against the withdrawal by the Railway Executive of the passenger service on the Newburgh and St. Fort branch, due to take effect from July 3. The case was heard recently in the Scottish Court of Session, when the pursuers maintained that the defenders (the Railway Executive) were bound, in the exercise of their statutory duties, to continue the existing passenger train services until they could provide an adequate alter-

native system of transport by omnibus or otherwise. For the defenders it was submitted that what the pursuers claimed was not to be found in any statute, and in point of fact they were seeking a right of veto in the whole question. Counsel moved for recall of the interim interdict, arguing that the action was irrelevant and incompetent, that the pursuers had no title to sue, and that the court had no jurisdiction to entertain the action. The Lord Ordinary, Lord Blades, pointed out that the Railway Executive said that on July 3 they had an alternative transport scheme in being ready to operate. But for the fact that interim interdict was granted, this would have been functioning today. The interdict was recalled, pending judgment.

Forthcoming Meetings

January 5 (*Fri.*).—Institution of Electrical Engineers and Institution of Mechanical Engineers, joint meeting at the Institution of Mechanical Engineers, Storey's Gate, St. James's Park, S.W.1, at 5.30 p.m. Discussion: "Mechanical Handling."

January 5 (*Fri.*).—Scottish Society of Students of the Locomotive, at the Board Room, 302, Buchanan Street, Glasgow, C.2, at 7.30 p.m. "The Relationship between Cylinder and Coupled Wheel Dimensions on Express Engines," by Mr. William Robertson.

January 6 (*Sat.*).—Electric Railway Society, at the Fred Tallant Hall, Drummond Street, London, N.W.1, at 3 p.m. "A Glance at American Electrics," by Mr. H. W. A. Linecar.

January 6 (*Sat.*).—Historical Model Railway Society, at the Stephenson Locomotive Society, 32, Russell Road, London, W.14, at 3 p.m. "Railways 1841-1871," by Mr. R. G. Dettmar, Member of the Executive Committee of the Society.

January 10 (*Wed.*).—Railway Students' Association, London School of Economics & Political Science, Houghton Street, Aldwych, W.C.2, at 6 p.m. "The Road Haulage Executive—Their Tasks and Problems," by Mr. G. W. Quick Smith, Secretary & Legal Adviser, Road Haulage Executive.

January 10 (*Wed.*).—British Railways, Southern Region, Lecture & Debating Society, at the Chapter House, St. Thomas' Street, London Bridge, S.E.1, at 5.45 p.m. Display of films of the London Transport Executive and the Southern Region of British Railways.

January 11 (*Thu.*).—Irish Railway Record Society, "The Railways of Bard-na-Mona," by Mr. Redahan.

January 12 (*Fri.*).—Stephenson Locomotive Society, North Western Area, at the Manchester Geographical Society's Rooms, Deansgate, at 6.30 p.m. "The G.C.R. and its Predecessors," by Mr. George Dow, Public Relations & Publicity Officer, London Midland Region.

January 15 (*Mon.*).—Institute of Transport, at the Jarvis Hall (R.I.B.A.), 66, Portland Place, W.1, at 5.45 p.m. "Planning, Development and Operation of the Assam Lines of Communication, 1941-45," by Major-General G. N. Russell, Chairman, Road Haulage Executive, and Brigadier R. Gardiner, until recently Director of Transportation, War Office, & Commandant, Transportation Centre, Royal Engineers.

Railway Stock Market

Stock markets commenced the new year quietly with a waiting attitude in most sections, although rearmament shares were again in demand. Apart from the general disposition to await international developments, it will be impossible to assess the investment and market outlook until after the Budget. This is expected to bring still higher taxation, which will aim not only at helping to pay for the arms drive, but also to check inflation. Consequently, it is thought in many quarters that Budget tax changes may have widespread effects on company profits.

Already the sharp rise in commodity prices must be reducing profit margins for many companies unless they are able to expand their turnover substantially. Although company results which recently came to hand disclosed good profit increases and in some cases moderate dividend increases as well, these results covered a period when earnings were benefiting from expansion in export markets, and before the Korean war brought about a big rise in commodity prices. Owing to the rising cost of financing stocks because of higher prices, many leading industrial companies are in need of more capital. It is not easy to raise this by means of issues of ordinary shares, because, until the tax provisions of the Budget are known, it is very difficult to forecast earnings or dividends.

Foreign rail stocks remained rather more active, with main attention centred on Leopoldina on pay-out estimates. Prices of the latter fluctuated moderately, but buyers appeared to come in on any reaction. The 6½ per cent. debentures have been active around 147¼ and the 4 per cent. debentures were 99¾. The ordinary stock was up to 11, but, at the time of going to press, the preference stock has eased to 28. Leopoldina Terminal 5 per cent. debentures were 95¾ with the ordinary units at 1s. 7½d. A feature has been the demand for Brazil Rail gold bonds which strengthened to 44. Great Western of Brazil shares kept steady at 155s.

La Guaira ordinary stock kept at 76. United of Havana 1906 debentures were little changed at 16¼, and there was not much business reported in the company's other stocks. The 1906 debentures are probably one of the most interesting speculative possibilities in the foreign railway market. They may be worth twice their present price if there is eventually a fair take-over offer. Failing the latter, they might not be worth half their current market value.

Nitrate Rails have kept around 75s. and Taltal shares were 15s. 9d. Antofagasta ordinary and preference were 6¼ and 42 respectively. Manila Rail "A" bonds at 60 were little affected by the annual meeting: preference shares kept at 5s. 6d.

Bolivar "C" debentures were 58. Mexican Central "A" bonds strengthened to 47½. Canadian Pacifics have been less active around 44, and the preference stock eased to 75½; the 4 per cent. debentures were 99½.

Road transport shares turned a little easier on the reduction in the interim dividend of Aldershot & District Transport, which affected sentiment. Southdown kept at 121s. 3d., West Riding were 58s. and Lancashire Transport 67s. 6d. B.E.T. deferred stock has been firm at £510.

There was a firmer tendency in iron and steel shares, particularly those scheduled for nationalisation. This was due partly to the knowledge that if there were a change of Government there are plans to "unscramble" nationalisation.

On the other hand, the firmer trend in various shares, such as Stewarts and Lloyds and United Steel, was due also to the fact that they are well below their take-over levels scheduled in the Iron and Steel Act and that the Steel stock into which they are to exchange is likely to be long-dated carrying 3½ per cent. interest. The issue of nearly £350,000,000 of nationalisation steel stock planned for next month will be a big event for the gilt-edged market. The terms of issue have to be in line with those ruling in the market, and this large amount of stock will probably not disturb the latter to any extent.

Shares of locomotive builders and engineers have been rather more active, but price changes were small. Hurst Nelson were 59s. 3d. and Birmingham Wagon 31s. 3d. North British Locomotive have been dealt in around 19s., Beyer Peacock were 23s. 6d., Vulcan Foundry 25s., Gloucester Wagon 15s. 7½d. and Wagon Repairs 15s. 9d. T. W. Ward were 68s., Vickers changed hands around 36s., the latter partly on estimates of the nationalisation compensation for the big holding in the English Steel Corporation.

Traffic Table of Overseas and Foreign Railways

	Railway	Miles open	Week ended	Traffics for week: Total this year	Traffics for week: Inc. or dec. compared with 1948/49	No. of week	Aggregate traffics to date: Total 1949/50	Aggregate traffics to date: Increase or decrease
				£	£		£	£
South & Central America	Antofagasta	811	24.12.50	103,430	+ 30,100	51	3,592,534	+ 168,510
	Costa Rica	281	Oct., 1950	c1,015,192	+ c35,030	18	c4,361,063	+ c471,596
	Dorada	70	Nov., 1950	36,972	+ 13,063	48	428,205	+ 107,418
	Inter. Ctl. Amer.	794	Oct., 1950	$974,149	+ $394,917	43	$11,201,432	+ $1,091,307
	La Guaira	22¼	Sept., 1950	$69,726	— $39,529	39	$725,535	— $241,943
	Nitrate	382	15.8.50	10,816	— 8,656	32	286,336	+ 6,203
	Paraguay Cent.	274	22.12.50	₱222,646	+ ₱84,354	25	₱5,080,074	+ ₱1,479,575
	Peru Corp.	1,050	Nov., 1950	$7,577,000	+ $1,083,700	22	$38,783,000	+ $11,773,242
	,, (Bolivian Section)	66	Nov., 1950	Bs.13,612,000	+ Bs.2,401,000	22	Bs.56,586,000	+ Bs.4,428,836
	Salvador	100	Oct., 1950	c87,000	+ c19,000	18	c355,000	+ c42,000
	Taltal	154	Nov., 1950	$2,021,426	+ $408,947	22	$7,821,686	+ $1,641,363
Canada	Canadian National†	23,473	Oct., 1950	18,063,000	+ 2,947,000	43	150,250,000	+ 13,286,000
	Canadian Pacific†	17,037	Oct., 1950	12,247,000	+ 1,163,000	43	103,218,000	+ 2,895,000
Various	Barsi Light*	167	Nov., 1950	30,142	+ 2,482	35	231,667	+ 6,945
	Egyptian Delta	607	10.10.50	18,245	+ 1,296	28	319,911	— 24,005
	Gold Coast	536	Oct., 1950	261,844	+ 44,691	31	1,651,230	+ 35,555
	Mid. of W. Australia	277	Oct., 1950	42,456	+ 11,690	18	153,312	+ 41,071
	Nigeria	1,900	Jan., 1950	502,360	+ 38,978	44	5,017,814	+ 266,573
	South Africa	13,347	2.12.50	1,962,578	+ 384,454	35	59,158,649	+ 6,714,655
	Victoria	4,744	Sept., 1950	1,729,344	+ 103,977	13	—	—

* Receipts are calculated at 1s. 6d. to the rupee † Calculated at $3 to £1